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# ***JPRS Report***

# **Soviet Union**

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***Economic Affairs***

9 JULY 1987

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## SOVIET UNION ECONOMIC AFFAIRS

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## SELECTED MATERIAL ON STATE ACCEPTANCE OF PRODUCTION

## Kaunas Automation Plant

Vilnius KOMMUNIST in Russian No 2, Feb 87 pp 52-54

[Article by Regina Bichkauskene, partkom secretary, Kaunas Experimental Means of Automation Plant imeni E. Ozarskis, under rubric "Letters from Party Organizations": "State Acceptance: Requirements, Responsibility, Difficulties"]

[Text] "Are we really to believe that state acceptance of production does not attest to the fact that the technical control department has not been coping with its work? If it is forced to work better, isn't it possible that there would be no need for state acceptance...?" We were asked that question by workers in Shop No. 10 last autumn, when the plant was preparing for the beginning of state acceptance. During the political day that was being held at the shop, we replied to that question by explaining to the people that they should not compare the two forms of quality control -- the departmental form and the statewide form. With the introduction of state acceptance, the role and importance of the OTK [technical control department] will not be reduced, but, on the contrary, will increase. This will be predetermined by state acceptance, which will bar the way to the departmental approach and which will control the entire cycle of production of output and all the links that guarantee quality -- the chief technologist's department and the production department, the technical control service, etc. -- consolidating all of them together in order to achieve the common goal, the production of fault-free output.

It is not for casual reasons that I cite this example: the entire labor collective at our enterprise -- the Kaunas Experimental Means of Automation Plant imeni E. Ozarskis -- has shown a large amount of interest in state acceptance, and attempted to prepare for it as well as possible. Not only the plant's administrators and the state acceptance representatives engaged in organizing it, but also the enterprise's party organization. Thanks to its efforts, the question of preparing for state acceptance was discussed at meetings of the shop party organizations, and the Communist Party members' comments and recommendations were taken into consideration and found reflection in the corresponding plan of measures to be taken, which plan supplemented and put into concrete form the measures that had been set down by



the Communists early in 1986 for the entire five-year plan to improve the quality of output. Their implementation will considerably increase the party's responsibility and exactingness in the fight for quality.

We are delighted that among the small group of workers who have been granted the right to use their personal stamp of quality, the tone is set by Communist Party members V. Ptashinskas, A. Gromitskas, Yu. Lukoshyavichyus, and Yu. Myaldzhyus. The Communists direct their attention to every instance of defective output, and analyze its causes. The party shows special exactingness when dealing with Communists who produce defective output. Although such instances are very few (in September-November 1986 there were seven of them), the shop party organizations and party groups evaluate this as an emergency situation. And no indulgences are shown to those persons who deliberately produce defective output. For example, CPSU member Ya. Rukhay, who abused the right to identify articles with his personal stamp of quality, and who deceived the collective and the government, has been brought to party responsibility.

During the changeover to state acceptance, a good initiative was taken by the party group in the chief technologist's department where Sh. Abdullin is the party group organizer. Inasmuch as the members of that group are specialists who determine the quality, each of them received a responsible assignment.

At the 14 November 1986 conference at the CPSU Central Committee, attention was turned to the fact that the party committees at enterprises are supposed to help in selecting the workers for the state acceptance agencies and are supposed to be concerned about establishing close contacts with the labor collectives and the party organizations in order to achieve the common goal, the improvement of the quality of output. Today it can be asserted that those contacts have been established and are constantly becoming stronger. Much has been done by joint efforts to explain and propagandize the goals of state acceptance. During each of the political days that were held in the shops, the party organization acquainted the workers with the tasks of state acceptance, and the workers in the state acceptance agencies gave reports on the essence of state acceptance; A. Ramonas, the head of state acceptance at the plant, spoke at party meetings in certain shops. The people at the plant, jointly with workers in the state acceptance agencies, prepared means of graphic agitation -- posters and displays propagandizing this innovation.

The main thing is to achieve a situation in which the enterprise Communists and the state acceptance workers "...fight with all their heart and soul for the common cause. If the state acceptance representative sees that a certain sector is producing a particular part with defects, he goes there himself, and calls in the designer, the engineer, and the technologist, organizes production, and, together with the workers, fights for quality. That is the approach that will receive the proper response from people" (PRAVDA, 16 November 1986). Those words by M. S. Gorbachev, which he said at the previously mentioned conference at the CPSU Central Committee, express succinctly the essence of the joint work performed by the production managers and the representatives of state acceptance. The first months of that work have already shown that, thanks to the dual efforts of both the production managers and the acceptance workers, there has been a reduction in the

quantity of defective output. At the present time 54 percent of the output being produced corresponds to the highest category of quality. This, obviously, is the fruit of the prolonged and purposeful work performed by the entire labor collective and its party organization. What must be done to assure that this fruit will continue to grow even more in the future?

An analysis of the reasons for the defective work, which analysis was carried out specialists at the enterprise and state acceptance, indicated that the claims being received frequently were caused by the poor quality of the components arriving from other enterprises, some of which components fail to last for even the warranty period or fail to correspond to the standards. The second cause of defective output is the obsolete machinery and equipment, inefficient machine tools with programmed control, inferior articles produced by the electronics industry, operational materials, etc.

The service that has been called upon to avoid these shortcomings or at least to reduce their receipt to some extent is the so-called input control, when, with the aid of special devices, everything that is received from other enterprises is checked. This very important prerequisite for the high quality of the articles, unfortunately, exists for us only theoretically. This occurs because the USSR Ministry of Instrument Making, Automation Equipment, and Control Systems, over a period of decades, showed little concern for the metrological outfitting of our plant. The result of this neglect is the lack of even the most elementary metrological equipment, for example, for mechanical measurements.

Considering the fact that metrological equipment, as a rule, is too expensive for a single enterprise, and, in addition, its capacity is sufficient for an entire group of enterprises, we recommend combining the funds of several enterprises in a cooperative manner at large-scale industrial centers in order to provide with equipment the standardization and metrology centers that have been created. This can be made the responsibility of the machine-building and instrument-building enterprises in the republic.

On the other hand, the departmental interests of individual ministries and enterprises have become difficult to surmount. For example, USSR Ministry of the Electronics Industry establish "special shipment conditions" for us: 8 percent of the output arriving at our plant from enterprises in that ministry can fail to meet the specifications and the requirements of the standards. Putting it more simply, the ministry is deliberately planning defective output, ignoring the customers who are supposed to use those defective articles to produce fault-free output.

There is yet another large problem -- the start-up, adjustment, and repair of machine tools with programmed control. The only administration in the Baltic republics that has this capability -- Latvremstanok -- is incapable of fulfilling all the necessary operations. Therefore we invite adjusters and other specialists from various machine-tool building enterprises throughout the country. The specialists arrive a month or two later, and then, after they leave, the machine tools go out of commission again. Doesn't it seem reasonable that there should be created in our republic at least one specialized start-up and adjustment administration in this area of

specialization, using for this purpose the cooperative funds provided by the enterprises?

Neither the administrators at our plant, nor the state acceptance workers, not the party committee remain indifferent to these problem areas. Not only economic and other sanctions, but also personal contacts and the cooperation provided by the Communist Party members have helped us to get rid of the defective articles that arrived at our plant from the Kiev Releavtomatika Plant and the Mukachevpribor Plant.

By going through the party's Leninskiy Raykom in the city of Kaunas, the enterprise's party committee requested USSR Ministry of Machine Tool and Tool Building Industry and its Soyuzstankoremnaladka Production Association to help to achieve a situation in which the machine tools with programmed control that are present at the enterprise would operate without breaking down.

In the future, when state acceptance of output is introduced at all major enterprises, the customer enterprise will have much greater opportunities to influence the producer enterprise -- the state acceptance workers will make sure of that.

The Communist Party members at our plant completely share the thought expressed by Comrade M. S. Gorbachev at the previously mentioned all-union conference, to the effect that "...the state acceptance agencies which have scarcely been announced have already, in a few places, become bogged down in bureaucratic methods and red tape" (PRAVDA, 16 November 1986). We have sensed that at our plant also. S. Trakunas, deputy plant director, has computed that, with the introduction of state acceptance of output and the introduction of other directive documents into effect for the new forms of reports, the plant will currently need an additional supply of approximately 400 kilograms of paper.

It would seem that it is necessary to simplify the state acceptance documentation.

It is difficult to understand why, during the period of restructuring, when we are supposed to orient ourselves toward the best output in the world, the union organizations in material-technical supply, and primarily the Soyuzglavpribor Administration, do not allow us to stop the production of an obsolete electrographic copying machine and one type of heat regulator, because during the current year we are supposed to count on taking money out of our own pocket for output in the first category with respect to which a rebate in the wholesale price is applied. Because acceleration, first of all, must be carried out by means of improving the quality of the output.

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Uzbek Garment Industry

Tashkent PARTIYNAYA ZHIZN in Russian No 2, Feb 87 pp 38-43

[Article by R. Sadykov, general director of the Krasnaya Zarya Garment



Production Association in Tashkent, and S. Parfirova, party committee secretary: "State Acceptance: The Struggle for Quality"]

[Text] Our association's output, in the direct sense of the word, is always on view: we make outer garments. Anyone, to the extent of his tastes and requirements, can decide whether the style of an overcoat is attractive, or how well the overcoat has been made. In a word, both the merits and the shortcomings of our work also are on view. It is for that reason, perhaps, that state acceptance of output at the enterprises that produce clothing, footwear, and other consumer goods is fraught with the greatest difficulties. Our highest OTK [technical control department] is the customer. It is the customer, figuratively speaking, who makes the final evaluation concerning quality.

On the other hand, it is precisely the enterprises that produce consumer goods, all the things that we need every day, that must be doubly or triply exacting with regard to quality, since the poor quality of that output, as was mentioned at the conference at the CPSU Central Committee on questions of state acceptance, causes not only economic harm, but also social, spiritual harm. That is what largely determines people's moods and their attitude to all the processes that are occurring in the country. "It is necessary to offer a person a new commodity," M. S. Gorbachev said at the conference at the CPSU Central Committee, "with new consumer qualities, and then he will purchase it and evaluate it, and will be grateful."

We are well aware of the entire importance and complexity of this work. The words "state acceptance" currently determine the entire frame of mind, the entire atmosphere in the collective. This is the topic of discussion at party and worker meetings, in shops and brigades, and even in private conversations. We conducted the first experiment as long ago as October 1986, and starting in January 1987 the association has changed over completely to state acceptance of output.

The restructuring process has been a difficult and sometimes simply painful one. But there have also been noticeable shifts. Most importantly, however, there has been a change in people's psychology. We recall that in October, when state acceptance representatives first appeared in the shops, some workers asked, "Will you be staying with us for a long time?" People do not ask questions like that now. Everyone is well aware that state acceptance is here to stay. There will be no turning back. It is necessary to restructure our way of thinking.

Two chief tasks confronted the association's managers and party committee at the first -- preparatory -- stage of the work: to explain to the collective the goals and tasks of state acceptance of output and to form its apparatus. It was decided, as the first step, to ask the advice of the Communist Party members and the party aktiv. An expanded session of the party committee was held, with the participation of the party organization secretaries and the administrators of the production subdivisions. Working together, the participants discussed the problem, planned the basic stages in the preparation and conversion to state acceptance of output, and developed a list of first-priority measures and the persons responsible for their fulfillment.

A kind of initiative group was created, which subsequently coordinated this entire job. The group was headed by the association's chief engineer.

Then the preparatory work began in the labor collectives, the brigades, and the administrative services. It was important to explain skillfully the meaning and tasks of state acceptance, and to make everyone completely aware of the necessity for this step as an inseparable component in the acceleration strategy and the party's course aimed at the fundamental restructuring of the national economy and the raising of the standard of living of Soviet citizens.

Everyone needs good-quality, attractive goods. That is very obvious. But in order to make an article that is of good quality and is attractive, it is necessary to apply special efforts, special professionalism, and increased responsibility for the job at hand. Under the conditions of the garment assembly line, where every article passes through dozens of hands, high reciprocal exactingness is also necessary. Sometimes many people do not have a sufficient amount of these qualities. Therefore collective and personal responsibility for the high quality of output, for the honor of the association's trade mark, has been the topic of discussion at worker and party meetings and in the shops and brigades.

It must be said that the struggle for quality finds understanding in the collective. Many workers and specialists have made suggestions about how to improve the job, and have mentioned weak links that must be reinforced first of all. All their comments were taken into consideration when refining the comprehensive program for improving the quality of output for the 12th Five-Year Plan.

The administrators and the party committee devote a large amount of attention to the formation and growth of the state acceptance apparatus. We were well aware of how unusual and how responsible the position of head of the new agency is. That person must be an efficient engineer who is completely knowledgeable about production, and at the same time a scrupulously honest person. We stopped on the candidacy of the association's deputy chief engineer, Mamura Khamidovna Abidova. She has worked in the branch for more than 20 years, starting as a sewing machine operator. She is a graduate of an institute in the textile and light industry, has been an ordinary engineer, department technologist, and chief of the experimental shop. She has carried out a large amount of public work, and was repeatedly elected member of the party committee. Effective 1 September 1986, Mamura Khamidovna began her new job and immediately engaged actively in the work.

The administrators and the party committee helped her to select state acceptance cadres. They recommended exceptionally worthy persons who would not act against their conscience, as well, obviously, as being professionally trained, since a person who is casually assigned to state acceptance can bring nothing to the common cause except harm. Every candidacy was thoroughly discussed in the collectives where the people worked, and at the party meetings. And that is how engineer-technologists, party members N. Gulyamova, L. Bykova, L. Sevastyanova, foreman L. Bokhadyrova, and other specialists of ours were assigned to the new job. Several state acceptance workers were

invited from other enterprises in the branch. At the present time the nondepartmental control apparatus has been basically staffed.

Starting with our first steps, we increase the authority and importance of the new service, and help it in every way that we can. Sometimes discussions arise to the effect that state acceptance has taken on its very own people, so won't it turn out that the new agency will turn into a kind-of factory OTK? The nondepartmental control service has been given large powers, and the reason why it is called nondepartmental is because it does not depend in any way upon the enterprise.

But one also should not view it as a kind of constant opponent who has nothing to do but try to locate shortcomings. We are engaged in one common cause. Our purpose is not only to eliminate defective output, but also its causes, and to raise the technical level of the output. The members of state acceptance help to locate bottlenecks, they inform the subdivision managers about this, and they instruct the workers in the shop OTK's. In a word, they actively promote the restructuring in all areas.

The preparation of the factory's OTK service has began. We carried out the special instruction of the checkers in the technology of manufacturing outer clothing with a consideration of the increased demands on quality. In the garment industry everything is kept to standards, up to and including the requirement about how many rows of quilting there must be per centimeter. Most frequently the defective output occurs precisely because people do not adhere to the standards. In one operation the material doesn't quite stretch far enough, in another the dimensions are slightly off again, and pretty soon the article no longer conforms to its model. A thorough knowledge of the standards and the technical documentation is mandatory for the checkers.

The final stage in instruction was the certification of the checkers and the re-examination of the statute governing the awarding of bonuses. According to the new statute, OTK workers can be given bonuses in an amount of up to 40 percent of the wage rate, provided that there are no claims from the trade system. There has also been a considerable increase in the salary rates (from 150 to 230 rubles) for checkers engaged in accepting the most complicated and especially fashionable output. These measures have the purpose of increasing the exactingness and material responsibility of the OTK service for the high quality of output.

We also organized training for foremen and technologists according to a 108-hour program. The theoretical classes were combined with practical work. For example, every foreman and technology was given the opportunity individually to sew a woman's light-weight overcoat from pieces of fabric that had been cut to size, with a consideration of the requirements of experimental production. The depth of the person's theoretical knowledge and the quality of his practical skills became the basic criterion for certifying the specialists.

Brigade leaders took a part-time 72-hour retraining course. One hundred eight-six workers raised their proficiency level in advanced experience schools, and 70 were taught related occupations.



The economic and party training of cadres is constructed in conjunction with the overall work of improving the quality of output.

In October 1986 we conducted the first experiment, and some of the output went through state acceptance. It must be said that its results largely proved to be unexpected and instructive for us, for the entire collective.

In recent years the quality of the sewn outer garments produced by the association has noticeably improved, and the esthetic appearance of the article has become much more attractive. Our specialists keep an eye on the directions that fashions are taking, and they make official trips to get fashion ideas and to visit the country's leading enterprises. We work in close contact with the Central House of Fashions and the republic one. The customers' demand for the association's output has increased noticeably. But suddenly a large number of the articles that were manufactured during the control periods were rejected by state acceptance: there was deviation from the standard, and defective output. In October we failed to fulfill the plan and undershipped output valued at 1,730,000 rubles. That was a bitter lesson for everyone.

We began analyzing the reasons for our failure. We went through the entire technological chain. A large number of problem areas were revealed. A number of production services and shops turned out not to be provided with technical-norm documentation, standard models, or measurement devices, and did not have enough mannequins. The damp heat treatment shop had gross violations of the technological conditions. Many defects were the result of the low proficiency level of the sewing machine operators. And this is something else that happened: even though the design was a pleasing one and the quality of the sewing was good, the notions and trim were wrong -- the ones that were needed were not available at the warehouse. All these shortcomings were added up and summarized, and then, on the basis of the results of the first state acceptance, we listened successively to oral reports given at party committee sessions by the managers of all the basic production subdivisions.

An especially large number of complaints were directed at the experimental shop, the material-technical supply service, the damp heat processing shop, and garment shop No. 5. The question that was posed directly was: how will we correct the situation? What was required was not giving objective causes as an excuse, but an extended list of measures and specific actions. Monitoring of their fulfillment was assigned to the quality commission operating under the association's party committee. It must be said that it has already been possible to do much of what was planned.

But what about the defective output? It had to be redone. Sometimes one and the same article was returned to the shop two or three times. Naturally, they interrupted the production tempo and reduced the labor productivity. The wages of the sewing machine operators fell. People started requesting release from their jobs. They began to be suspicious of the new service. A few attempted to classify the checkers' exactingness as unfounded nit-picking or the undermining of the collective's material interests. Instead of achieving a fundamental improvement in the organization of production and explaining to

people the true meaning of the innovation, certain administrators openly supported the unhealthy rumors that the strict measures would continue to have a detrimental effect upon people's wages. The party committee gave a well-principled evaluation to those who were carrying those moods into the collective and hindering the firm establishment of the new service.

At the same time, the first state acceptance revealed very obviously that the level of proficiency of many workers in the cutting-sewing and other shops, especially the young ones, was low. The attempt is being made to raise that level of proficiency as quickly as possible, but things are not working out -- there is a lack of experience and a shortage of practical skills and knowledge of advanced work methods. It is necessary to set up more effective training for the cadres and to disseminate advanced experience more broadly, especially since everyone has something to teach. For example, on foreman S. Tupayeva's assembly line, state acceptance did not reject a single article. Consequently, we definitely can work at the level of the highest requirements.

In the plans for this year we plan to provide various forms of instruction and refresher courses for 850 workers in the mass occupations. These include target-subject courses, advanced-experience schools, and individual apprenticeship. We have a group of experienced mentors who have had good results in teaching occupational skills to young apprentices. Those mentors include V. Aleksandrova, M. Volodina, and A. Pastukhova from the cutting-sewing shops, and N. Nazarova from the damp heat processing shop. We direct the shop administrators and their primary party organizations toward assuring the experience gained by these foremen is used as completely as possible.

We attempt to increase the role of the brigade as an educator, to increase the collective responsibility for the high quality of output. At the present time most of our production lines operate on a single work order. Provided that the economic mechanism of the brigade contract is operating correctly, this form of organizing and paying labor becomes an important means in the struggle for the high quality of output. And we have examples of this. Recently one of our best brigades, which is headed by foreman S. Tupayeva, following the example of the people in Sverdlovsk, came forth with the initiative "Let's give the quality of output the brigade's collective guarantee." This is a very beneficial matter. The party committee approved the brigade's initiative and recommended to the primary party organizations that they extend it as broadly as possible in the labor collectives. The brigades that became the first followers of the initiative were the garment-sewing brigades of O. Kostyrina in Shop No. 4 and N. Marukhlenko in Shop No. 6; they have been turning over output on the first presentation.

We give a large amount of attention to publicizing the measures being carried out. By means of the wall newspaper and local radio broadcasting, we constantly inform people about the state of affairs in the collective and the qualitative indicators of the work being done. Everyone knows in what shop and in what brigade most of the defective output is being produced, and know where a real fight is being waged for the honor of the association's trade mark. And the party meetings that we conduct are more and more open. At those meetings one can hear sharp criticism being leveled at persons guilty of the poor organization of production and at sloppy workers.

Complete restructuring apparently will not occur soon, but a turning point in people's awareness has already been achieved. We can no longer work the way we used to. We do not have the right to do that. There has been an increase in the personal responsibility of everyone for the quality of the output, and there is reciprocal exactingness in the work being done.

But the restructuring has also stirred up and brought to the surface many things which, in past years, led to violations and to disproportions in the economy and which we have to pay for today. In the race for quantity, for the gross, with a large shortage of labor resources at the enterprise, broad use was made of overtime work and work on days off. Moreover, this was done to the detriment of quality. The achieved labor productivity indicators did not reflect the true state of affairs in the production area. And planning from what had been achieved distorted the true picture even more. We have now been confronted by a situation when, with an obvious shortage of workers to fulfill the planned volume of operations, we cannot take on new people, since otherwise there will be a sharp drop in the base labor productivity, and an overexpenditure of the wage fund. And under the new economic conditions (since January 1987 the enterprise has been converted to full cost accounting), the correct relationship between the rates of increase of labor productivity and wages is one of the decisive conditions for the normal economic functioning of the enterprise. It turns out that the past accretions of undesirable situations are forcing us again to use storm tactics, to strive for plan fulfillment at any price, and this cannot fail to have an effect also on the quality of the output.

Scientifically substantiated labor norms are in existence. By using them the enterprise can prepare a strenuous plan that lays no claim to any rebate, but is a realistic and feasible one. But even under the new management conditions, despite the recommendations of the planning agencies, the republic's Ministry of Light Industry and Uzshveypprom are continuing the practice of planning from the top down, without any consideration of the real situation, without taking into consideration the opinion and the views of the working collective. For 1987 the association was assigned a plan that has not been reinforced by raw-material or labor resources.

Under the conditions of state acceptance, another acute problem that arises is the problem of the interrelationships with subcontractor organizations. Most of the fashion designs are created at the enterprise, thus making it possible to reduce the periods of time needed from the moment of creating the articles until their appearance on the store shelves. But frequently the designs lose their original appearance because different fabrics, notions and trim, and fur collars are used. People ask for one thing, and then they get something completely different.

We are increasing our demands upon the material-technical supply services and the experimental shop. Under the new conditions they must work in a more time-responsive and flexible manner, and must take into consideration the public's rapidly changing demand. Quite recently they worked only on the basis of requisitions that had been prepared a year in advance. And not infrequently, in response to various requests made by production managers,



which were dictated by necessity, the reply given was, "It's not stipulated in the requisition." Today this practice is unacceptable. The party committee has required the administrators in those services to react in a time-responsive manner to the requests made by production.

It must be said that our efforts are not yet always successful. And it is not only the fault of our service organizations. Subcontractors supply us with fabrics in woven structures and colors that are ten years old, that have become unpleasantly traditional, but at the same time of poor quality, with the most varied flaws. Last year we made 114 claims against suppliers for materials with a total value of 165,700 rubles. But the situation has been changing slowly. The fur industry continues to make collars that make the cost of overcoats considerably more expensive. Sometimes the price simply scares the customers away. Under the conditions of state acceptance, it is necessary to increase the demands made upon the suppliers not only with regard to the quantity, but also the quality and variety of the materials being supplied, whether the basis ones or the subsidiary ones. The control must be from start to finish, along the entire technological chain, including the enterprises that are supplying the materials from which the article is made up. For the time being, however, it is only the garment industry that pays for the commodities that are not wanted by the customer.

We are becoming increasingly convinced that the problem of quality is a comprehensive problem. And we attempt to view every narrow sector from precisely those positions.

We assign a large role in the future improvement of the quality of output to the remodeling and technical re-equipping of the enterprise. It was noted long ago that it is precisely in the quality of output that one sees the most complete expression of the technical level of production. Our enterprise has a long history, dating back more than a half-century. The shops have become somewhat cramped, some of the equipment is obsolescent or completely worn out, and there are several unconnected production entities where new technology and backward technological schemes exist side by side. In 1987 the remodeling of the enterprise will begin, and a number of foreign companies will be asked to participate in it. The construction plan provides not only for a qualitatively new level of engineer support of production, but also a new approach to creating the workers' working and recreational conditions.

At the present time we are already working hard to fulfill the production program for the second year of the five-year plan. The socialist pledges taken by the collective state that we will guarantee the high quality of output, and increase the production of commodities accepted at the first presentation. We are convinced that we will be able to overcome the difficulties and fulfill what has been planned. A factor that has become an important incentive in this work is the socialist competition for the worthy meeting of the 70th anniversary of the Great October Socialist Revolution, which competition is gathering momentum with every passing day.

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## GOSBANK CHAIRMAN DEMENTSEV SUMS UP TASKS FOR 1987

Moscow FINANSY SSSR in Russian No 3, Mar 87 pp 7-18

[Article by V. V. Dementsev, chairman of the board of the USSR State Bank: "Tasks of the USSR State Bank in the Second Year of the Five-Year Plan"]

[Text] In January 1987 the CPSU Central Committee held a plenum that heard and discussed a report by Comrade Gorbachev, general secretary of the CPSU Central Committee, "On Restructuring and the Party's Personnel Policy."

The plenum fully endorsed the political and practical conclusions drawn by the Politburo of the CPSU Central Committee on the basis of an analysis of the situation that had come to exist in Soviet society in the period preceding the CPSU Central Committee's April (1985) Plenum, and it confirmed the principled evaluation of the course of restructuring and the initial results of the implementation of the decisions of the 27th CPSU Congress.

M.S. Gorbachev's report comprehensively disclosed the causes of the complex and contradictory processes in the development of the economy and other spheres of society's life that created the objective necessity for restructuring. The profound analysis of the country's development during the time since the CPSU Central Committee's April (1985) Plenum that was contained in the report and the decree of the CPSU Central Committee's January (1987) Plenum, as well as the documents of the sixth session of the 11th USSR Supreme Soviet, which adopted laws "On the State Plan for the USSR's Economic and Social Development in 1987" and "On the State Budget for 1987," attests to the correctness and vital necessity of the steady implementation of the strategic course of accelerating the country's socioeconomic development that has been worked out by the party and is supported by the Soviet people.

The party and government are aiming at the need for a radical change in the pace and quality of the country's economic development, and at the implementation of measures that are, in their underlying essence, revolutionary and transforming in nature. Restructuring presupposes a resolute overcoming of stagnant processes, the breaking up of the mechanism of retardation, the further invigoration of work, and an increase in efforts in all areas.

The results of the fulfillment of the state plan for the country's economic and social development and the USSR State Budget for 1986, which were examined at the USSR Council of Ministers' meeting this January and at the CPSU Central Committee's January (1987) Plenum, confirm the fact that the process of reinvigoration in the economy and the social sphere that was begun on the basis of the decisions of the CPSU Central Committee's April (1985) Plenum and the programmatic directives of the 27th Party Congress is gaining strength and acquiring increasingly great scope and depth.

Positive changes have been achieved in all branches of the national economy, and a further growth has been realized in the scale and efficiency of social production. Produced national income rose by 4.1 percent, as against plan estimates of 3.9 percent and a 1985 figure of 3.5 percent. The increase in the production of industrial output came to 4.9 percent, as against a plan target of 4.3 percent. The annual assignment for overall sales of output was fulfilled by 101 percent. The volume of production in agriculture was 5.1 percent higher than in 1985.

The productivity of social labor rose by 3.8 percent, as against 3.2 percent in 1985. A substantial reduction occurred in the unit-cost of output. The turnover of material funds increased, and stocks of uninstalled equipment were reduced. The basic financial and economic indices also improved. Profitability in the social economy came to 19 percent, and profits rose by 2 billion rubles.

At the same time, it was noted that along with the positive trends there remain a good many unsolved problems and bottlenecks. Work on restructuring is not in keeping with the spirit of the times everywhere. In some sectors of the national economy it is taking place slowly and not affecting deep underlying processes.

As a result of large losses and nonproductive outlays and the failure to fulfill assignments for the expansion of trade turnover, the annual plan for the growth in national income used for consumption and accumulation proved to be unfulfilled.

Serious changes failed to occur in the investment process, and only two-thirds of the facilities included on the state plan's list were commissioned. Difficulties remain in trade in foodstuffs and industrial goods.

Presenting a principled and constructive criticism of the shortcomings and omissions, the party sets the task of increasingly putting into action the long-term strategic factors of economic growth: the acceleration of scientific and technological progress, improvement of the structure of production, improvement of product quality and the conservation of resources, and the activation of social policy.

This is the standpoint from which the national economic plan for the current year has been drawn up. Practically the entire increase in national income, output and work in the branches of the material sphere is slated to be obtained through a growth in labor productivity.



In accordance with the 27th CPSU Congress's directives to enhance the social orientation of economic development in the plan for 1987, for the first time a comprehensive social section has been drawn up that encompasses all aspects of Soviet people's lives. Approximately three-fourths of national income is being allocated for measures directly connected with satisfaction of the people's material and spiritual requirements and the improvement of their well-being.

1987 has been assigned an extremely important role in implementation of the party's strategic policy of acceleration. The success of the entire five-year plan and the fulfillment of long-range plans will depend on this year's results.

The country has begun a radical transformation of its physical facilities and equipment. Large-scale measures are being carried out to improve management. As of 1987 all industrial enterprises and associations have been shifted to experimentally tested methods of economic management.

Leninist principles regarding democratization of the management of the economy are being implemented. Fundamental legal acts have been drawn up, and a draft USSR Law on the State Enterprise (Association) has been submitted for public discussion by the whole people; it is intended to radically change the conditions and methods of economic management in the basic unit of the economy and codify in enterprises' activities the combination of the planned principle and full cost accounting, independence and accountability.

One of the priority tasks for all management levels in 1987 is to improve the level of financial and economic work, especially in branches that have been shifted to the principles of full cost accounting and self-financing. New management methods are making it possible to improve the efficiency of economic work and orient it toward the avoidance of outlays. Full cost accounting and self-financing and long-term economic normatives are inseparably bound up with an improvement in the way that financial work is set up, especially at the enterprise level. Now what determines their economic well-being will be not insistent requests for the allocation of resources but their actual end results.

A profound generalization of accumulated experience in the work of these branches is needed in order to ensure the economically intelligent and effective utilization of the intensive factors of growth and of various forms and methods of management for strengthening the financial condition of enterprises and the circulation of money.

A radical improvement of the content and methods of the work of financial and credit agencies is needed with a view to the objectives of the economic reform. So far, as noted in M. S. Gorbachev's report at the CPSU Central Committee's January (1987) Plenum, the restructuring of their work is proceeding slowly and even lagging behind transformations in the production sphere.

This requires employees of the State Bank to make more active use of the economic levers at their disposal--money, credit and the settlement of

accounts--for the purpose of expanding the economic independence and initiative of associations and enterprises and increasing their responsibility for the attainment of the highest possible end socioeconomic results of production activity, and to seek and find new approaches to their work and update its forms and methods.

In 1986, the restructuring of banking work was begun by way of implementing the decisions of the 27th Party Congress and the CPSU Central Committee's June (1986) Plenum with a view to the criticism directed at the financial and credit agencies, but the measures that have been taken in this direction are only the first steps.

On the basis of improving credit planning and improving the procedures for granting loans, credit resources are being utilized more rationally. Amounts of credit have come to correspond more closely to the rates of growth in production volume and assignments for accelerating the turnover of material resources. Thus, as of 1 January 1987, indebtedness for short-term loans had increased, in comparable terms, by 0.8 percent, whereas the growth in national income was 4.1 percent and the growth in the volume of industrial production was 4.9 percent.

New forms of providing credit are being introduced that are more fully in keeping with the tasks of strengthening cost accounting; the rights of local bank institutions in the planning and regulation of credit have been expanded; and cooperation between bank institutions and local soviet agencies has been stepped up with the aim of developing and implementing measures for increasing commodity resources and satisfying the population's consumer-service needs. The granting of credit or of postponement of repayment of loans is contingent on the mandatory requirement that the borrower and the ministries carry out specific measures ensuring the repayment of credit by established deadlines as a result of improving production efficiency and eliminating bottlenecks in economic operations. Such an approach has made it possible to achieve a certain reduction in defaults on debts owed the bank.

It is necessary to reinforce these positive changes.

At the same time, many institutions have been slow in restructuring the style and methods of their work, have not been showing the proper activeness in enhancing economic influence on accomplishment of the tasks of developing the economy of a kray, oblast or republic, and have not drawn closer to the needs of production.

The questions of restructuring work were discussed by the board of the USSR State Bank on the basis of reports from all the republic (union republic) offices and a number of kray and oblast offices. On the basis of the results of this examination, detailed decisions were adopted that show the positive experience of certain bank institutions and reveal serious shortcomings in the work of others. The weak influence of certain offices on the development of the economy of republics, krays and oblasts was noted. This pertains, for example, to the Georgian, Azerbaijan, Turkmen and Kirghiz republic offices.

In conditions in which the new economic mechanism has been extended to practically all branches of the national economy, and full cost accounting and self-financing are being introduced, the work of the USSR State Bank as a economic management agency requires further qualitative changes. The CPSU Central Committee's January (1987) Plenum also orients us toward this.

The basis of the bank's everyday work should consist of a comprehensive and qualified analysis of the economic and financial state of affairs of the ministries and associations, an analysis which makes it possible to make correct decisions in organizing credit and account-settlement relations and disbursing cash from the State Bank's funds, and to actively contribute to the introduction of new methods of economic operation.

Attention should be focused on the 100-percent fulfillment of the plan for deliveries of output, including consumer goods, in full accordance with customers' orders, the reduction of the unit-cost of output, the saving of material resources, the increased utilization of secondary raw materials, the increasing of profits and labor productivity, and the strengthening of financial, credit and account-settlement discipline.

It is necessary to fully restore the fundamental principles of the granting of credit--promptness, the rate of repayment, and the security of bank loans--to close all channels whereby excessive money enters into circulation, and to enhance the role of credit in the intensification of production.

An especially responsible attitude must be taken toward the use of a differentiated approach in granting credit. In this work formalism has still not been eliminated, and there is no clear orientation toward the end results of enterprises' performance. Certain State Bank institutions withdraw credit from enterprises, associations and organizations without taking into account the effectiveness of measures they are carrying out to improve their economic and financial state; and credit is not always restored in timely fashion to enterprises that have demonstrated their credit-worthiness.

Such an approach to matters does not accord with the demands of restructuring. A well-thought-out flexibility is needed in the utilization of measures of credit influence. They should be rigorously applied to those enterprises, associations and organizations that fail to fulfill their commitments to eliminate shortcomings. Conversely, economic incentives must be provided for good work. Attention deserves to be given to the experience of State Bank institutions that work to see that checkups are made of enterprises that have been placed in a special credit category by their superior organizations, with the participation of representatives of financial agencies and State Bank institutions, and that ensure that measures of influence are publicized, using for this purpose the press and meetings of the labor collectives of enterprises, associations and organizations. The executives of State Bank institutions should show greater independence in arranging economically effective relations between the bank and the enterprise and should contribute in every way possible to the strengthening of enterprises' economies and their observance of account-settlement and payment discipline.



Taking into account the fundamental changes that are taking place in the economic mechanism, it is necessary to accelerate the restructuring of the bank's economic work in order that it be fully in keeping with the tasks of economic management in the new conditions. New normative acts governing banking activity are taking effect that make fundamental changes in the mechanism of granting credit, settling accounts, credit planning, financing capital investments, and monitoring the expenditure of money for remuneration for work. In order that these acts "work," it is necessary not only to carefully study them but to apply them in actual work creatively and with initiative and responsibility.

A further, steady improvement in the organization of credit and economic work is needed. Its potential has not, by far, been fully tapped. Suffice it to say that in a whole series of cases bank credit is drawn to cover prolonged financial shortfalls of enterprises. For the State Bank's Georgian and Azerbaijan republic offices, the rates of growth in credit investments are running higher than the rates of growth in production volumes.

The rate of repayment has not yet become the basis of credit relations. Yet the turnover time of raw materials and other materials and finished products is reflected in the rate of repayment of credit. In accordance with the importance that is being attached to accelerating the rate of turnover of material resources and the saving of them, the role of credit must also be enhanced. It should become a genuinely effective economic tool for normalizing the material economy.

Favorable economic and organizational prerequisites have now been created for doing this. Measures have been worked out for reducing stocks of commodities and materials in the national economy for enterprises and organizations; as of 1987 the normative method of planning material stocks has been introduced. At the same time, ways of marketing unused commodities and materials through the USSR State Committee for Material and Technical Supply have been outlined.

The new procedures for granting credit on the basis of the aggregate of material stocks and production outlays have been designed in organic unity with these measures; these procedures have been introduced in 1987, initially for industrial enterprises that have been placed on full cost accounting.

New forms of providing credit have also been introduced in other branches of the economy. They have in common the aggregation of the object of credit, the reduction in the number of loan accounts, and elimination of superfluous regulation in credit relations along with a simultaneous strengthening the bank's economic monitoring of the state of stocks of items of value, and of the correct utilization of credit.

All this places special responsibility on State Bank offices and divisions. It stems from the fact that the improvement of credit relations in and of itself does not automatically guarantee accomplishment of the tasks of credit policy, the acceleration of the rate of turnover of working capital, and observance of the principles of credit. The human factor should be fully utilized here. An economist who provides service to an enterprise can no longer, as frequently happened in the past, provide a loan in accordance with

limit authorization received "from above" without knowing the reasons for the need for credit. He himself is required to decide on the possibility of granting credit taking into account existing legislation, economic advisability aimed at strengthening the economy, and timely repayment, and to bear full responsibility for the correctness of the decision he makes.

The planning and economic administrations of the USSR State Bank's republic (union-republic) offices are acquiring an increased role in the provision of methods guidance in the area of credit planning and in monitoring the fulfillment of credit plans and the correct deciding of credit questions.

Special attention should be given to credit relations with enterprises and organizations in the agroindustrial complex. At a meeting held in the CPSU Central Committee on 23 January 1987 on matters connected with the implementation of the CPSU Central Committee's decree "On Urgent Measures to Raise Labor Productivity in Agriculture on the Basis of the Introduction of Rational Forms of Labor Organization and Cost Accounting," special emphasis was placed on the extremely great importance that financial and credit influence is assuming in the APK's new economic mechanism. In the past year positive changes took place in the restructuring of credit relations with that complex's enterprises and organizations. The USSR State Bank's credit policy is increasingly directed at providing economic incentives for production and strengthening the principles of cost accounting. New regulations have been introduced that, in accordance with the directives of the 27th CPSU Congress, on the one hand toughen the rules for the utilization of bank credit, and on the other are aimed at strengthening the economy and simplify the process of opening financing and providing planned credit.

In 1986, through the further strengthening of kolkhozes' economy and the better-substantiated granting of loans, gross output was made to increase faster than credit investments for the first time in recent years. This practice must be reinforced as kolkhozes and sovkhoses shift to self-support [samookupayemost] and self-financing.

However, measures that are comprehensive in nature and contribute to improvement of the organization of financing and the strengthening of payment discipline have not yet been fully worked out. It was noted at the meeting that the employees of financial agencies rarely make local visits and do not work sufficiently with the economic and bookkeeping services of farms and rayon agroindustrial associations, which is making it more difficult to improve the new mechanism of economic management in the APK.

Credits for agriculture continue to grow at unjustifiably high rates for certain republics, such as the Ukrainian, the Kirghiz, the Tajik and others. In a number of cases the unmonitored provision of credit occurs, and it is used to cover up mismanagement. The lack of a thorough analysis of the rights of a farm to credit results in creating the conditions for the excessive provision of credit as early as the stage at which the credit plan is drawn up. Instead of planning for the repayment of debts in accordance with the specific features of the economic cycle, certain State Bank offices unjustifiably provide for the issuance of new loans. For these reasons excessive credit requirements were stated for the fourth quarter of last year

by the Ukrainian, Russian, Kirghiz, Moldavian and Tajik offices of the State Bank. For the first quarter of 1987 credit that was unwarranted by the growth in production volumes was planned for the State Agroindustrial Committees of the RSFSR and the Georgian and Moldavian union republics.

Such a growth in loans is the result, to a large extent, of violations of the rules for providing credit and poor knowledge of the USSR State Bank's normative documents and instructions and of the economy and finances of the farms being served. Thus, the restructuring of credit relations with the rayon's farms has not yet been carried out in the State Bank's Kashinskiy Division in Kalinin Oblast. The division is not managing the credit process, and all of its stages from planning to the repayment of loans are not under the bank's supervision and organizing influence. Credit is provided to farms on the basis of unbalanced plans, which means that it is already known in advance that the credit that is being granted will not be repaid. Action is not taken to recover unsecured debts that are discovered in connection with State Bank loans, and deadlines are not set for the repayment of loans. Credit is used to cover financial shortfalls, which are usually caused by the diversion of working capital for unplanned purposes and by other violations of financial discipline. This is why credit is not repaid on schedule.

Some farms provide in their plans for unjustifiably high deductions to consumption funds, placing increased demands on credit. For example, last year certain sovkhoses in the Dagestan ASSR provided for allocating more than 80 percent of their profits to economic-incentive funds, while they planned to obtain bank credit for increasing the normative level of their own working capital. State Bank institutions in Kostroma Oblast and the Mordovian ASSR, and the State Bank's Rezinskiy Division in the Moldavian SSR have been committing serious violations of the rules for providing credit and granting excessive credit.

The organization of credit relations with industry under the USSR State Agroindustrial Committee requires fundamental changes. In the Kazakh, Tajik and Azerbaijan republics, the rates of growth in credit investments in this branch have been running higher than the rates of growth in the production of output. About one-third of the industrial enterprises of the USSR State Agroindustrial Committee fail to fulfill their plans with respect to financial results, which results in the violation of their solvency.

The managers of State Bank offices must seriously concern themselves with improving the guidance of the work of their structural subdivisions in providing credit services to enterprises in the agroindustrial complex's system, and must increase every employee's exactingness and personal accountability for the state of affairs in this sector.

The provision of credits to organizations of the State Agroindustrial Committee should be strictly linked to the development of production and other indices of their work. It is necessary to bring about the return to economic circulation of money diverted for unplanned purposes and to put a stop to the use of resources for unproductive needs.



The substantiation of the distribution of revenues to accumulation and consumption funds in farms' 1987 production and financial plans, the observance of proportions between the rates of growth in labor productivity and in remuneration, and the guarantee of the repayment of planned credit must be thoroughly analyzed.

State Bank institutions must coordinate their work more closely with agencies of the USSR State Agroindustrial Committee and the planning and financial agencies, must actively work to strengthen the economies and finances, first of all, of farms that have been failing to fulfill their plans, and must provide them assistance in organizing their economic work. They should take an active part in the development by agencies of the State Agroindustrial Committee of specific measures aimed at eliminating existing shortcomings and introducing genuine cost accounting, as well as advanced methods for the organization and remuneration of labor, in all units of the agroindustrial complex.

The bank's work should be oriented as fully as possible toward enhancing the role of credit in the acceleration of scientific and technological progress. However, as noted at a 24 December 1986 meeting in the CPSU Central Committee with executives of the union ministries and departments, many ministries have not yet become genuine headquarters for scientific and technological progress. The growth in the technical level of output has been retarded in certain branches. Planned rates of the updating of industrial output for 1986 were not achieved. The technical level and quality of many products remains low. The proportion of the total production volume accounted for by products in the top quality category is not high.

All this requires the USSR State Bank's central apparatus, with the active involvement of the offices and divisions, to thoroughly study the possibilities of enhancing bank influence on the acceleration of scientific and technological progress, especially in the branches of the machine-building complex, and to implement the measures that are worked out.

Proceeding from the tasks of accelerating scientific and technological progress, the efforts of bank personnel should also be focused on enhancing the effectiveness of work in financing and providing credit for capital investments and reducing the length of the investment process. Strict oversight must be established to ensure the priority allocation of money for reconstruction and technical reequipment, the acceleration of the commissioning of facilities under construction, and the observance of normative construction periods. When these periods are exceeded, payment should be recovered according to established procedures from clients and contract construction and installation organizations.

Financing, the provision of credit, and the settlement of accounts in construction should be carried out on the basis of the new Regulations for the Financing of and Provision of Credit for Construction and Regulations for Contracts for Capital Construction, and checkups for all construction clients to ensure that the amounts of contracts concluded for the delivery of equipment correspond to the planned amounts of equipment to be turned over for installation and the normatives for equipment stocks to be carried over. When

violations of contract discipline occur, financing should be suspended and fines should be levied.

It is also important to direct the efforts of the bank's engineering personnel toward conducting inspections aimed at ensuring that design and estimate documents correspond to the demands of assignments for design work and to existing design norms and estimate normatives, as well as toward the rational utilization of material resources in the investment process.

In conditions of the transition to self-support [samookupayemost] and self-financing, the importance of enterprises' own funds as a source of the financing of capital investments is increasing sharply. Institutions of the State Bank must give increased attention to the formation of enterprises' financial plans. Progress in the fulfillment of the plan for the accumulation of economic agencies' own funds must be strictly monitored, and the rights that have been granted to the bank with regard to the compulsory exaction of enterprises' own funds designated for financing must be exercised more widely.

Bank oversight of the state of contract and account-settlement discipline in the economy should receive a new impetus this year in conditions of the increased responsibility of associations, enterprises and organizations for the fulfillment of contracts for the delivery of output and goods. Recently the amount of fines for the failure to pay invoices for output and goods on time was doubled, with this money to be charged to the material-incentive funds of the purchasing enterprises. The significance of these economic measures especially arose in connection with the growth in 1986 of reciprocal debts of economic organizations. Simultaneously, fuller use should be made of all forms of bank influence on the guaranteed timeliness of accounting in the economy.

Bank institutions should shift enterprises that systematically violate contract discipline to the settlement of accounts with customers on the basis of their prior acceptance of payment demands, regardless of the percentage of total sold output the customer refuses to accept.

Increasing the effectiveness of bank oversight over output quality exercised in the process of the granting of credit and settlement of accounts is becoming especially urgent. The question of quality was raised emphatically at the aforementioned 24 December 1986 meeting in the CPSU Central Committee. Lately the bank's work in this area has been somewhat stepped up.

However, the problem of quality in the economy has not been solved. It represents a fundamental aspect of restructuring. "In essence, this is a question of tremendous socioeconomic importance, for the results of the work of all branches of the economy are summed up in product quality," stressed M. S. Gorbachev in his speech on state acceptance, which was introduced as of 1 January 1987 at 1,500 leading enterprises in a whole series of industrial branches as a fundamental, essential measure aimed at stepping up the campaign for high product quality.

The USSR State Bank should use economic levers to contribute to the greatest extent possible to the work of the state acceptance services, and should draw

on their materials in deciding questions of credit relations with associations and enterprises that violate the requirements of the USSR State Committee for Standards.

It is necessary to exclude the remainders of raw materials and other materials that are used to produce substandard output from security for credit. In situations in which it is economically expedient, a procedure should be employed whereby consumer goods are paid for following their actual acceptance with respect to quality. These and all other measures of influence stipulated in existing regulations are intended to substantially increase the USSR State Bank's role in solving the problem of quality.

The strengthening of money circulation as an inseparable part of the party's social program is a task of great state importance.

Institutions of the State Bank should give special attention in this connection to the real balancing of the population's monetary income and expenditures, and to the unconditional fulfillment of the income part of the cash plan.

The effectiveness of the USSR State Bank's work in improving money circulation depends to a great extent on active influence through credit on the work of the economy, the introduction of full cost accounting, the fulfillment of plan assignments, and the observance of the economic proportions of development.

The implementation of the decree of the CPSU Central Committee, the Presidium of the USSR Supreme Soviet and the USSR Council of Ministers "On Measures for Further Enhancing the Role and Strengthening the Accountability of the Soviets for the Acceleration of Socioeconomic Development in Light of the Decisions of the 27th CPSU Congress" is of great importance to the strengthening of money circulation.

The efforts of economic agencies in the center and locally should be directed toward the maximum balancing of the population's monetary income and expenditures by means of the more complete satisfaction of consumer demand for goods and services. In this connection, the role of the planned balance of the population's monetary income and expenditures has been increased. Starting in 1987 this balance for the USSR and each union republic is confirmed as part of the State Plan for the USSR's Economic and Social Development.

At the same time, in a number of republics and oblasts sufficient attention is still not being given to ensuring a correct correlation between the population's monetary income and expenditures, and in certain instances attitudes of dependency are being displayed. Instead of seeking out additional commodity resources at the local level, some republics and oblasts make requests for the allocation of market commodity stocks from centralized sources, and in some cases, requests for additional reinforcements.

That practice cannot be tolerated. A great deal here depends on State Bank institutions, which should systematically report to local executive bodies on progress in the fulfillment of assignments in the area of money circulation,



make appropriate recommendations, and work to achieve an economical expenditure of money in the economy for the remuneration of labor, an increase in the production of consumer goods that are in demand, an expansion of the sphere of paid services, and an improvement, on this basis, of the correlation between the population's monetary income and expenditures in republics, krays, oblasts, cities and rayons.

At the CPSU Central Committee's January (1987) Plenum it was noted that at the present time a comprehensive program is being carried out for improving matters in the social sphere. New principles for raising pay in the production branches have been worked out and are being implemented.

The solution of social problems and thereby the strengthening of money circulation are inseparably bound up with the work of light industry. Despite that branch's fulfillment of plans for the production and sale of output for 1986 as a whole, lags occurred in the production of extremely important types of products, their assortment and quality are not being improved very fast, and many associations and enterprises work at a sporadic pace and are in grave financial condition. The production of goods for which there is no consumer demand is continuing.

State Bank institutions should analyze in detail the financial situation of every enterprise, study the reasons for the accumulation of goods for which there is no demand, raise questions in a qualified manner before appropriate organizations in order that effective measures can be adopted for the radical improvement of their work, and work to achieve the more complete utilization of existing capacity for increasing the production of consumer goods, including the possibility of doing so through the use of credit. Special attention must be given to strengthening financial and credit discipline in this branch.

The bank's work in the area of money circulation proceeds in conditions of an expansion of the rights of local soviets in planning the development of trade, and a closer link between retail trade turnover and the population's monetary income and the timely maneuvering of commodity resources.

However, the potential of trade as an extremely important unit in the social sphere has by no means been fully utilized. In 1986 the overall plan for retail trade turnover for the country as a whole was unfulfilled. This requires an enhancement of bank influence to ensure the unconditional fulfillment of plan assignments for trade turnover.

It is necessary to emphasize attention on the identification of bottlenecks in each trade system and every enterprise, and to work out and implement practical measures for enhancing bank influence to ensure the unconditional fulfillment of plan assignments for trade turnover.

An extremely important task is to prevent the granting of credit to cover stocks of commodities that do not meet consumer requirements in terms of quality. To this end, it is necessary to work more resolutely to introduce the procedure whereby consumer goods are paid for after their acceptance in terms of quality, to put a stop to the payment with bank credit of invoices

for goods for which there is no consumer demand, and to insist that organizations and higher management agencies in trade adopt measures for the prompt sale of slow-moving and stale goods.

Bank credit plays a prominent role in the implementation of major measures for the development of consumer services. As an experiment, additional measures are being implemented to improve the economic mechanism in production associations and at enterprises of the Belorussian SSR Ministry of Consumer Services.

In order to more fully satisfy the population's requirements and ensure a balance between its monetary income and expenditures, it is necessary to use credit and other economic tools at the bank's disposal to actively support the development of cooperative forms of operation in the sphere of material and technical supply, consumer services and public catering, municipal services, and local industry and construction.

Starting this year it is important to organize the systematic monitoring of the development of individual labor activity and to work out a mechanism for assisting it using credit levers.

Work to strengthen money circulation is inseparably bound up with the large-scale measures that are slated for the 12th Five-Year Plan in the area of the organization and remuneration of labor.

For the first time associations, enterprises and organizations will introduce new, higher wage and salary rates using money earned by labor collectives. The independence of associations, enterprises and organizations in providing incentives for work done with a reduced number of personnel and in making expenditures from the wage fund is being significantly expanded.

They may allocate the entire savings in the wage fund, including that which is obtained by reducing the number of personnel, improving the wage structure, and revising output norms and other norms for labor outlays, bonus payments and pay supplements and increments, for increasing wage and salary rates.

At the same time, it is stipulated that in the period in which new wage and salary rates are being introduced, associations, enterprises and organizations will take the necessary steps to guarantee against overexpenditures of their wage funds and ensure that labor productivity grows at a faster rate than average earnings.

The task of State Bank institutions is to ensure the necessary preciseness in the observance of established procedures for granting credit to associations, enterprises and organizations for wages. In this connection, their rights to utilize savings in the wage fund should not be infringed on.

The State Bank is entrusted with monitoring the stability of normative rates for the formation of the wage fund that are confirmed for associations, enterprises and organizations. Systematic studies should be made of the effectiveness of the existing procedures for monitoring the expenditure of wage funds by associations and enterprises that have been shifted to the new

conditions of economic operation, full cost accounting and self-financing, and for enterprises and organizations in state trade and the consumers' cooperative system, light industry and consumer services--expenditures of pay funds formed on the basis of normative rates from revenues earned from the sale of output.

The task has been set of raising the level of bank oversight over the use of wage (pay) funds by sovkhozes, kolkhozes and other agricultural enterprises in light of the procedures introduced as of 1 January 1987 for establishing normative rates for the formation of wage funds on the basis of normative rates per 100 rubles of sold (gross) agricultural output that are stable for the five-year period.

In the system of measures for the improvement of money circulation, a prominent place belongs to the work of savings banks. The further development of the savings system, enhancement of work to attract the population's funds, and improvement of its services are a priority task.

The widespread introduction of the practice of paying workers' and office employees' wages and collective farmers' income through savings banks is an important measure. The socioeconomic aspect of these measures consists in the fact that the working people's earnings are utilized more thriftily and, thereby, their family budget is organized more correctly; for the bank, expenditures connected with the transportation, storage and disbursement of cash are reduced.

Work needs to be stepped up to further develop the transfer to deposit accounts of sums from the working people's monetary income, as well as to develop noncash transactions by the working people with trade, utilities and other organizations through savings banks.

Steps should be taken to bring about an expansion of the savings bank system, a more rational territorial siting of them, and an improvement in their operating procedures and standards of customer service.

New tasks are being accomplished in the State Bank in the area of the mechanization and automation of operations. A comprehensive program of work has been drawn up for automation in the USSR State Bank's system for the 12th Five-Year Plan and up to the year 2000; it provides for the creation of an integrated system for the management of banking operations (the USSR State Bank IASU [Integrated Automated Management System]).

Implementation of the comprehensive program should ensure higher basic systemwide indices in comparison to those that have presently been achieved with the existing level of automation.

The improvement of foreign economic relations and enhancement of their effectiveness are an organic part of the thorough restructuring of economic operations. An economic mechanism intended to give associations and enterprises a stake in the results of foreign trade operations is to be put into place in a short time. In conditions of the restructuring of foreign economic activity and the granting to many ministries and associations of the



right to enter directly into the foreign market, and to all enterprises--the right to enter into direct cooperative relations with partners from the socialist countries requires a new approach to the organization of credit and account-settlement relations in this sphere, and a strengthening of the influence of bank levers on the development of progressive new forms of economic cooperation and of the principles of production operations that are self-supporting in terms of valuta earned and spent [valyutnaya samookupayemost] in foreign economic relations.

At the CPSU Central Committee's January (1987) Plenum it was emphasized very strongly that personnel policy is a decisive means for realization of the CPSU's programmatic goals. The plenum pointed out the need for it to undergo serious updating and be brought as close as possible to the demands of the present day. The attitude of personnel toward restructuring and the tasks of accelerating the country's socioeconomic development, and their actual deeds to bring about restructuring are becoming a decisive criterion in their evaluation.

In this connection it is necessary to constantly proceed from the premise that the unconditional accomplishment of the tasks facing the bank is inseparably bound up with the restructuring of economic thinking, the surmounting of inertia, and the development of initiative on the part of bank specialists in realizing goals in the area of economic and social development. It is necessary to find and advance personnel who not only support the policy of restructuring but actively and creatively involve themselves in the process of renewal, give all their efforts to the common cause, and know how to achieve success.

The year that has begun is the year of the 70th anniversary of Great October. This is a major event in the history of our motherland. In the anniversary year all labor collectives are developing socialist competition for the successful fulfillment of plans for the acceleration of socioeconomic development.

There is no doubt that bank employees will make their contribution in the second year of the five-year plan to the implementation of the historic decisions of the 27th CPSU Congress and subsequent plenums of the CPSU Central Committee, and will mark with great labor successes this important date for the country and all progressive humanity.

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## VASKhNIL's TIKHONOV INTERVIEWED ON PRIVATE PLOT QUESTION

Moscow LITERATURNAYA GAZETA in Russian 8 Apr 87 p 12

[Interview with Vladimir Aleksandrovich Tikhonov, VASKhNIL academician, by Kapitolina Kozhevnikova, columnist for LITERATURNAYA GAZETA: "So Where Is It That We Are Being Called: LITERATURNAYA GAZETA in the Village" under the rubric "Man and the Economy"]

[Text] [Question] Vladimir Aleksandrovich, I focused on "minor forms" in agricultural economics long ago and I wrote about them in past years because I have always been convinced that without them life would be difficult in the contemporary village. We cannot ignore either the private plot or the family plot. One now hears all the time that a family farm has been started there, and here...But it appears that readers are not completely familiar with this system. In addition to proponents of the "minor forms" there have always been opponents, or people whom we politely call opponents. These people are very emotional in their response to the fact that many journalists and writers are in favor of having cows and young bulls on private plots and of having kolkhozes and sovkhoses assist in the management of these plots. Recently, some of our fellow citizens have begun to criticize the press especially zealously for its "transgressions," although the party demands that we alter our concepts, discard obsolete concepts and accept the Law of Individual Labor Activities. Here our opponents become thoroughly agitated--help! Where is it that we are being called?

P. Bugov, a reader from Kherson, entitled his letter, "Where Are We Being Called?," in which he voiced his concerns and his disagreement with the call to develop the minor economy, and supported his opinions with quotes from K. Marx and V. I. Lenin. In the 29 October 1986 issue of LITERATURNAYA GAZETA I responded to P. Bugov. The editors received many responses to these polemics.

The number of opponents has increased--they comprise slightly less than half of all those who wrote the editors on this subject. Still the majority voted "Yes." "What luck that P. Bugov does not have any power," writes S. Gafarov from Sverdlovsk Oblast. "What our village has not suffered!" reports A. Zhavoronkov from Moscow. "And still we feel that Russia is reviving." "I grew up in the village. I fully agree with the reporter's position. The saddest thing of all is that Bugov is not alone..." (O. Rotar, Kishinev). And so forth. I will not hide the fact that we are concerned about those who

defend P. Bugov, and who defend him in a bellicose manner and even aggressively. Let us examine this question.

[Answer] What is it that especially worries the comrades?

[Question] Of course all of the letter writers complain that we do not publish their letters in full, but we do not have room for this in a newspaper column. We can only present excerpts.

Here is what M. Buynyy of Odessa writes: "In her argument, K. Kozhevnikova points to the development of the private plot in Hungary. But we cannot follow either Hungary or Bulgaria. We do not have to! We have different conditions. Our peasant has become accustomed to the commune, to the collective. It is already in his blood. The breadth of production operations is essential for us. Production growth can be increased by all the people, by the entire village..."

"...On the one hand, the Food Program is being carried out, on the other hand private-ownership interests are being fostered. We cannot do without material incentives for people, but we must fight against the psychology of the proprietor" (G. Kulikov, Kiev). "It is not the kolkhoz but the private trader and the speculator who are in control at our so-called market. They have established high prices in a monopolistic manner" (V. Arkhipkin, Moscow).

[Answer] I see. Let us analyze what it is that alarms Muscovite V. Arkhipkina. Why are people afraid of the development of market-oriented individual labor? Because in non-organized markets they pay with their own wages, and the average wage that exists in the country does not give an individual the opportunity to buy such expensive products too frequently. But these comrades do not want to understand that the private plot and family and individual contracts are not to blame for high market prices. This is a reaction to economic competition as well as to the shortage of food products in state stores. Comrades who are offended by the non-organized market and by individual labor must understand that there is just one way to fight high prices--by improving the health of our entire economy.

[Question] In other words, you recommend that we examine economic matters more extensively?

[Answer] Yes. For a long time development proceeded in one direction without alternatives. It was felt that only heavy machine building and highly concentrated production could yield a positive effect for us. But the world of economics is organized differently. An objective necessity exists to coordinate large-commodity specialized production with other types of production--middle and small. Large-commodity production cannot be flexible enough to respond to changing social needs. This means that we must provide incentives in every way possible for the creation of family farms and family contracts which represent nothing other than the primary cell of cost-accounting collective production. In no case should we put up barriers to the private plot. Everyone understands that in the given case the private plot is the family link of public production. The private plot satisfies private needs as well, and it can operate according to long-term economic contracts

with kolkhozes, sovkhoses, consumers' cooperative stores and cooperative cafes and cafeterias. In this way, family commodity production is included in the system of national production.

[Question] Many of the letter writers feel that hidden behind the concept of "personal property" is that same private...

[Answer] In general in our scientific practices there are no clearly-expressed criteria with regard to privately-owned [chastnyy] and personal [lichnyy]--in this sense the terms are interchangeable. This is my point of view, my position. Can the means of production in the individual enterprise be private property? Yes, if they were purchased with an individual's own money. Here there is no difference between village and city residents. The peasant's light truck or mini-tractor, especially when it has a trailer, is no different from the Zhiguli automobile that a city resident has. Personal property is transformed into privately-owned property only when the means of production are used by the owner to hire outside labor. But our constitution and laws do not permit this. Neither does public opinion...Thus under socialism the private plot will never become the testing ground for the rise of the private trader. But it can become a monopoly on the non-organized market. And the readers did note this correctly.

As long ago as 1918 Vladimir Ilich expressed the concept of enterprises which do not entail losses. But at that time there was no opportunity for the practical application of his ideas. It was a harsh time--the Civil War, with harvest failures, ruin and hunger in the large cities. All of this made it necessary to alter the policy of war communism. Products were distributed without commodity exchange in contradiction to market laws. In the village there was a requisitioning of farm produce. The peasant was left only some seed and that amount of grain needed to feed his family, and the surplus was seized and put into a food fund for large cities. Later the policy became harsher--even seed was seized from the peasant...In the spring of 1921 it became clear that this practice could not continue further. V. I. Lenin introduced for deliberation a scheme for a transition from requisitioning farm produce to fixed taxes in kind. The size of the tax was almost just half the quota of the previous apportionment. The state acquired the difference from peasants through purchases using tax money or in exchange for manufactured goods.

The tax fulfilled the function of an economic stimulus--while the tax remained unchanged, increased production meant a growth in peasant income. In this way, economic enterprise, which Lenin saw as "the predominant, if not exclusive" type of economic relationship under socialism, was stimulated.

The system of taxes and economic independence were the economic conditions, according to Lenin's ideas, on the basis of which cooperation in its various forms could arise and develop. But unfortunately history dealt differently with this question later. In the mid-1920's the task of industrializing the country arose. Capital was essential. At that time its basic source was grain sales. About 80 percent of the grain was in the possession of the peasant of average means--he had received land from the Soviet government and had begun to work it. He was also involved in various village trades. The



kulak as an exploiter of hired labor, as a village bourgeois had been virtually eliminated in the course of the Civil War.

[Question] It turns out that during the period of collectivization the classical bloodsucker--the kulak--practically disappeared. Many people reproach me for distorting the truth. In my answer to P. Bugov I related that in my native village working peasants with large families who had never been exploiters were dispossessed as kulaks.

[Answer] In my opinion this is the most unexplored question in our post-revolutionary history. There is no reliable data. There are also no criteria by which to determine whether a peasant household was a kulak household. In Russian a kulak is a second-hand dealer of grain, a village merchant. During the revolution the term kulak expanded to mean a peasant with hired labor. In June 1918 kombeds [Committees on Poverty] were created to combat the kulak. During the half year of their existence they seized 50 million hectares of land, or over two-thirds of the land owned by kulaks, for use by poor families and families of average means; they confiscated machinery, livestock and other means of production. The material base of the kulak enterprise was destroyed.

The suppression of the Antonovists and other rebellions and the extensive application of anti-kulak laws during the following 3 years completed the utter devastation of the old kulak group. Soviet authorities carried out an equitable per capita division of land, created equal work conditions for peasants and called for expanding the area in crops, increasing commodity production and strengthening the economy. In 1925 peasants were allowed to lease land.

Under these conditions, with the supremacy of Soviet power, where did the new kulak come from? Stalin's assertion that in 1928 5 percent of the country's peasants were kulaks and that of these 2-3 percent (500,000-700,000 households) were especially prosperous and were subject to individual tax assessments is very unexpected.

I feel that here quantitative social criteria were replaced by purely qualitative valuations of the level of development of a farmstead. Included in this kulak category were peasants who through their own labor on the land, given to them by Soviet authorities, were able to make their enterprises better than the average level. Evidently, it was they who were subject to dispossession as kulaks. We know that in one of his discussions Stalin said that millions of people were dispossessed as kulaks. That is the truth. Here one can neither subtract or add on...

But after all in the mid-1920's and until collectivization itself the country exported about 150 million poods of grain abroad. However, whereas at first the state traded grain purchased from the peasant, after collectivization it traded with confiscated grain. Lenin's ideas about taxation were pushed aside and the country made a complete transition to requisitioning of farm produce--first in the village and then in the entire planned economy. Grain was taken from kolkhozes very cheaply. A theoretical foundation was needed for this practice. And immediately people were found who made Utopian views related to the elimination of market production under socialism their theoretical weapon.

Scientific works appeared which proved that commodity production and socialism were antipodes. And eliminating commodity production meant eliminating the laws of commodity turnover. I feel that during that truly difficult time for our country a great deal could have been avoided to some degree.

Of all available forms of cooperation only one was selected--the kolkhoz. Today no one doubts the expediency of this form. But why were permanent and seasonal artels [cooperative associations of workmen and peasants], societies for the joint cultivation of land, associations for joint building, and so forth, forgotten? Why? Because in the kolkhoz land and other means of production of the peasant were collectivized. First domestic livestock and poultry were collectivized. The peasant lost the right to own them as a means of farm management. This comprised the basis for a harsh centralism in directing the implementation and distribution of products. The peasant was alienated from the means and results of production. While formally remaining their co-proprietor, for all practical purposes he was becoming a type of hired hand more and more.

[Question] The letter of K. G. Bezuglyy of Kokchetav Oblast is interesting. I will read an excerpt: "I fully approve of those writers who boldly and sincerely reveal errors and exaggerations; a large part of the blame is placed on my generation. I am the son of a Ukrainian worker. My father and oldest brother died during the Civil War. My mother took the family to a village in the Poltava region. We were fed and we survived. I grew up, joined the Komsomol and became a member of the komsomol's okruzhkom [District committee]. And then I went to a kolkhoz with complete authority. Our power was unlimited. We told grey-haired grain farmers what to do and when to do it. The harvest was in progress. We had to ship out grain. I was told that although the chairman was a communist his father had had land and a shoe repair shop. Be careful...My vigilance was soon repaid. The weather was dry and the grain crop was a good one. The kolkhoz farmers made sheafs and stored them in piles and stacks. When there were two stacks I ordered that people be transferred from bundling work and that the thresher be set up in order to more quickly send the grain in an attractive convoy. The chairman and peasants began to object--they said that the weather was good, that the grain had to be harvested now, whereas threshing could be carried out during rainy weather. But I threatened...While they were threshing the stacks it began to rain, a steady rain lasting many days. We did not fulfill the plan...Comrade Bugov, we did not spare the peasants who saved us from starvation. Later we did not show our gratitude to the widows of soldiers in the proper manner, and they harnessed themselves to the plow, plowed, sowed grain and gave everything to the front...Forgive me for my poor handwriting. I am writing from my bed, from the last step of my life..."

[Answer] Yes, this kind of testimony, this kind of insight is very valuable.

[Question] I cannot refrain from presenting an angry letter from a woman engineer from Kharkov. She has a different point of view: "Why did you, dear LITERATURNAYA GAZETA, rebuke your trustful reader, P. Bugov, to such an extent? Yours was not a response but an shout: 'How did the so-and-so dare to doubt that the expansion of individual forms of labor is for the benefit of socialism?' I do not agree with a single line of reporter K. Kozhevnikovaya's

response. I do not accept her tender reminiscences about the unjust dispossession of Uncle Misha and Uncle Vasya as kulaks. I do not accept the irony as concerns 'fellow-countrymen,' who feared more than death the fact that the specter of private property would imperceptibly, together with the piglet or a pair of apple trees in an orchard plot, creep into our lives and would destroy something important in them. I remember the story about the murder of a boy for 10 apples...I do not accept sarcasm with regard to "the voluntarily starving people"--the Food Program can be completed by increasing production, but it can also be successful if consumption decreases..." Similar letters are received from the village too.

[Answer] Everyone has a right to express his own opinion...But this type of extremism is not helping our cause. The private enterprise in the village provides 30 percent of all gross production in the agricultural sector. I think that we must follow a course toward gradual socialization of the private enterprise. Yes, yes. I have in mind not that crude, primitive form which people usually think of when they hear the term "socialization." I am talking about an organic integration of the private and public enterprise. What kinds of forms can exist here? There can be a long-term permanent agreement by which the public enterprise provides the private plot with the necessary material conditions for labor and the private plot then sells its products to the kolkhoz or sovkhoz. The peasant household can become integrated with public trade, including cooperative trade, again on the basis of an agreement which foresees the delivery of production resources. That is the second form of socialization.

But many comrades simply cannot understand or accept this. I spoke to a tall director from the Baltic states. I was trying to prove to him that these agreements will work if the private plot is supplied not just with pastures, but with feeds as well. He answered me that kolkhozes themselves are experiencing a shortage of mixed feeds. I feel that the kolkhoz should supply mixed feed as a priority to those who fatten young bulls by agreement. The kolkhoz has more opportunities to replenish its feed supplies. The peasant has no such opportunities...Finally, the private enterprise has the right to enter the non-organized market. Here is where the danger of monopoly that we spoke about arises. The state must, on a compulsory basis, regulate income by means of economic levers. In particular, this refers to income from the sale of products from the private plot at the market. This will force the peasant to either increase the volume of his production in order to compensate for state taxes or to sell his products to stores and restaurants. The most effective method is competition in the market. We must juxtapose kolkhoz and cooperative trade to the individual seller. This is being done, but timidly and insufficiently.

[Question] Passions relating to the private enterprise are not dying down. In some places military cordons are still set up in order to prevent people from going to market; hothouses are destroyed. Aleksandr Nikolayevich Orlov of Severskiy Rayon, Krasnodar Kray, writes fairly about the fact that here people who work honestly in their private plot also suffer. Here is the kind of tax he proposes be introduced for gardeners. One ruble of taxes should be levied per square meter of open area sown in a monocrop; 2 rubles--per square meter of land temporarily covered with a panel; and 4 rubles--per square meter



of heated hothouse. He feels that the state will receive a million rubles per year as a result of this.

[Answer] I think this is proper. Not long ago I was in the Turkmen SSR. All the gardens in the suburbs of Ashkhabad are covered with panels. People are cultivating dill, parsley and coriander and are selling the herbs at the market. Everything is in great demand. Kolkhozes and sovkhoses feel that there is no point in becoming involved in such trifles. Thus the proprietor of a private plot becomes a monopolist in the market as concerns certain types of products. Who is interfering with our using a flexible tax system? The income tax should be one thing for the individual who has an agreement with a public enterprise and something else for an individual who trades in the market. For monopoly prices there should be monopoly taxes; for normal prices--normal taxes. But we have at every opportunity--bulldozers...Why don't kolkhozes raise tomatoes, dill and roses and take them to market?

[Question] Just as long as follies are not committed...Remember the times when payments had to be made for each apple tree. The frightened peasants began to completely root out fruit trees then.

[Answer] Of course all of that was a serious mistake. We support establishing taxes not on the basis of production conditions but on the basis of the income received. Let us say that the oblast agroprom (agro-industrial committee) feels that too much emphasis has been placed on the sale of roses. At that point a tax can be placed on roses at a rate of up to 40 percent of sales profits, whereas dill and parsley, which are in short supply, can be taxed at 15 percent. Let the peasant decide what it is to his advantage to cultivate. A reader of LITERATURNAYA GAZETA writes that no type of contract is needed, that everything can be accomplished by attacking the job with the entire village. This is a call to the old non-economical methods, to confusion. The party's central committee is now calling for complete independence in management and for full material responsibility for the results. The better the organization of the activities of a manager, the better the economic results. M. S. Gorbachev has repeatedly said that it is through small cost-accounting labor collectives, the income of which depends solely on the results of their labor, that we will move toward bringing individual interests and the interests of society and the state closer together. Individual activity must be rewarded.

[Question] Vladimir Aleksandrovich, a considerable restructuring is taking place in all spheres of our society. It is closely related to the subject of our conversation. B. G. Yefremov, a teacher at the Kramatorskoye Machine-Building Technical School, has given his letter to the editor an interesting title--"To Restructure Means to Become Well Again." He writes, "For a long time out of conscientious, noble, Marxist (as it seemed to me) convictions, I had the same point of view as P. Bugov of Kherson, with whom the LITERATURNAYA GAZETA journalist has been polemicizing. We have carried our stereotypic concepts into the 1980's. The necessity to restructure must not only be understood, realized and felt keenly but also achieved through suffering."

[Answer] Yes, Comrade Yefremov is right--restructuring is a difficult task. Obsolete traditions and habits are strong...



[Question] If we return to the phrase, "Where are we being called?," F. Osadchiy of Alma-Ata answers this question very sincerely and spiritedly: "As a thrice-wounded soldier of the Great Fatherland War, I would like to answer all petty tyrants and demagogues. Writers call us to a normal human life in which there are sufficient quantities of meat, cheese and butter at all times. Writers call us not to drunkenness and idleness but to useful labor so that during our free time we can raise vegetables and fruit on our private plot. Now everyone knows that the greatest diversion from socialism is the empty stores, a lack of spirituality, misrepresentation and bureaucratism...I believe that the revolutionary wind of restructuring will cleanse our lives of orthodoxies. But the struggle against them will be long and unyielding."

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WEATHER, CROP CONDITIONS IN BASHKIR ASSR

Fall Field Operations

Moscow SELSKAYA ZHIZN in Russian 2 Oct 86 p 1

[Article by V. Orlov, SELSKAYA ZHIZN correspondent, Bashkir ASSR]

[Excerpt] At the same time, the republic's farmers are showing great concern for the harvest of the second year of the five-year plan. All farms are accumulating and cleaning seeds and preparing the fall plowed area. Fall field operations are being carried out jointly.

Flood Control

Moscow GUDOK in Russian 13 Mar 87 p 1

[Article by I. Tregubov, Ufa, under the rubric "Warning: Flash Flood!": "To Protect the Track"]

[Text] The Bashkir Division of Kuybyshev is thoroughly preparing itself for snow melting. With due regard for past years' experience, measures have been developed here, strict periods for their implementation have been determined, and managers have been appointed.

Specialists of track facilities under the guidance of senior engineer N. Pikalov inspected 130 sections considered the most dangerous during the flood period and outlined a plan of work on protecting the gauge against an erosion. River beds under all bridges have already been measured and ice is now being chopped off around supports.

During these fine March days the collectives of all seven track subdivisions of the railroad division together with the track machinery station uncover water-diversion ditches and gutters ahead of time. Signalers and power engineers have checked the condition of their devices in possible inundation zones and are preparing them for operation under flood conditions.

On request from the division management more than 4,000 cubic meters of antierosion materials are being prepared at the Minyar Stone Quarry, the

Biyankov Rubble Plant, and two ballast quarries of the Ufimtransstroy Trust and almost 100 cars with them will be delivered to stations for places of a possible erosion and roadbed subsidence.

The possibility of a flash flood has also been taken into consideration. In this case collectives of transport enterprises and local residents--in all about 3,000 people--will help railroad men. This force is fully sufficient. Moreover, bulldozers and other technical facilities have been placed at the disposal of railroad men.

An operational group controls the course of preparation for flood. It has also been entrusted with the provision of temporary housing and food for all participants in water control.

UDC 631.5

### Intensive Technology

Sverdlovsk URALSKIYE NIVY in Russian No 2, Feb 87 pp 2-5

[Article by A. Vagapov, chairman of the Bashkir ASSR State Agroindustrial Committee: "Bashkiria's Weighty Grain; Intensive Technology: Experience, Lessons; Key to High Harvests"; first paragraph is URALSKIYE NIVY introduction]

[Text] Last year the republic's farmers stored more than 3 million tons of grain in the homeland's bins. In the last few years grain growers in the Bashkir ASSR have widely utilized intensive grain cultivation technology. In this issue of the journal we offer readers a selection of materials revealing the experience in the application of this advanced method.

Our republic is a major producer of agricultural products in the Russian Federation. It annually produces grain, sugar beets, sunflower seeds, potatoes, vegetables, meat, milk, eggs, and wool worth 2.5 to 3 billion rubles. Hence it is clear that in the volumes of deliveries of products to centralized stocks Bashkiria also occupies quite a high place. For example, on the average, 1,758,000 tons of grain were annually sold during the 11th Five-Year Plan. At the same time, it should be noted that more than 340,000 hectares (12 percent) of the republic's grain fields are located in a zone of insufficient and unstable moistening, where, in addition, drought recurs periodically. Conversely, grain growers in northern and northeastern zones on an area of more than 856,000 hectares (35 percent) have to cultivate grain crops under conditions of increased soil moistening, where the length of the vegetation period is 110 to 118 days and of the frost-free period, 98 days.

On Bashkiria's territory there are all the basic types, subtypes, and varieties of soil of forest: forest-steppe, and steppe zones and of high mountain belts and chernozem occupies 62 percent, and grey forest soil, 33 percent. Furthermore, the intense ruggedness of the relief and the complexity of its form create many obstacles for farming or a highly productive utilization of equipment.

Under complex natural and climatic conditions the republic's grain growers and specialists must develop for every zone, subzone, and even individual region its own farming system and creatively apply it on every crop rotation field.

Such scientifically substantiated zonal farming systems were developed by the beginning of the 11th Five-Year Plan. The Agroprom took measures for their most rapid development. As a result, the general standard of farming rose. Nonmoldboard, moisture-saving soil cultivation (it is applied on 80 percent of our arable land) is one of its elements. Field productivity increased considerably. For example, whereas at the beginning of its introduction (1981-1982) grain yields totaled 10 to 13 quintals per hectare, during the last 4 years the average yield per hectare increased to 19 quintals.

The results of work last year especially gladdened us. For the first time in the republic's history 22.9 quintals of grain crops per hectare were gathered on an area of 2.8 million hectares. More than 3 million tons of high-quality grain were stored in the homeland's bins. The annual procurement plan was exceeded by 650,000 tons.

Intensive technology was the main lever of increase in the yield. In the fall of 1984 winter rye was sown according to this technology on an area of 250,000 hectares and in the spring of 1985 spring wheat, on an area of 350,000 hectares. Grain growers in Ilishevskiy, Dyurtyulinskiy, Chekmagushevskiy, Karmaskalinskiy, Aurgazinskiy, and Buzdyakskiy rayons, who have applied it in a full set, additionally obtained 10 to 12 quintals per hectare. On the average, throughout the republic winter rye produced 8.3 quintals of yield gain per hectare and spring wheat, 5.5 quintals. Owing to intensive technology, gross grain output increased by 400,000 tons. One ruble of additional expenditures on rye resulted in 67 kopecks of profit and on spring wheat, in 30 kopecks.

True, during the first year we have not attained the results envisaged by new technology both in terms of the harvest level and economic efficiency. However, they showed how big its effect on an increase in the yield and on an improvement in the quality of grain was. Grain growers could see for themselves that the intensive grain crop cultivation system ensured stable yields even under complex weather conditions.

In 1985-1986 the agro-industrial committee and RAPO under the guidance of party and Soviet bodies engaged in large-scale work on extensively introducing advanced methods of grain cultivation and on strengthening the intensification of all farming. The task of further improving zonal systems, significantly increasing the volumes of application of organic fertilizers to soil, expanding amelioration work, utilizing the agrochemical field cultivation complex, and expanding acid soil liming areas was set.

For these purposes specialists of the agro-industrial complex have developed the "grain" program. It is based on calculations of scientists, economists, farm managers and specialists, and RAPO.

The introduction of advanced technologies, cost accounting, and the collective contract is the basis for restructuring the style and methods of work by



agroprom personnel and for improving the entire management system. RAPO councils successfully develop the initiative of rural workers, actively involve them in production management, and increase the personal responsibility of managers and specialists of all the links of rayon agro-industrial associations and of kolkhoz and sovkhoz grain growers.

Thousands of sprayers of liquid concentrated fertilizers and toxic chemicals and various cultivators and spare parts for them so acutely necessary for the application of intensive grain cultivation methods were manufactured by the beginning of spring sowing of the first year of the 12th Five-Year Plan. Stocks of fuels and lubricants, fertilizers, and toxic chemicals were created in advance, for which additional transport facilities were allocated. In the fall of 1985 surface and nonmoldboard soil cultivation methods were used widely and, on the average, 3.5 tons of organic fertilizers per hectare of arable land were applied. Unregulated links for grain cultivation were organized additionally. Last year 95 percent of the arable land and the entire area sown with grain crops were handed over to them.

Intensive technology requires new knowledge from our personnel. We try to equip them with this knowledge. Seminars on problems of care of winter crops with a practical demonstration of utilized agricultural machines were held on base farms. The training of machine operators, agronomists, engineers, and leaders of mechanized links with their mandatory certification in knowledge of modern agrotechnological methods was organized on every kolkhoz and sovkhoz. Farm specialists and link leaders underwent training in RAPO and rayon association workers, in the committee.

Measures were taken to ensure a harmonious operation of all links during the period of performance of field work. In the fall of 1985 areas sown with winter rye according to intensive technology were doubled, that is, increased to 500,000 hectares. After thorough care winter crops began wintering in good condition. However, the prolonged warm weather since the fall and the thick snow cover led to the destruction of one-half of the crops. In spring more than 200,000 hectares had to be reseeded. However, grain growers did not lose their heads and cultivated spring wheat, barley, and oats according to the same technology on reseeded areas. Mineral fertilizers applied to winter crops in the fall served as a good support for spring crops. Thus, areas sown with spring wheat according to intensive technology were expanded to 618,000 hectares, placed after the best predecessors, and cultivated with an observance of all agrotechnological requirements. Work according to the new method enabled us to additionally obtain 10 quintals of grain crops per hectare on an area of 900,000 hectares.

Farmers in Baymakskiy Rayon made a special contribution to the Bashkir loaf of bread. On the average, they gathered more than 28.9 quintals per hectare on an area of 105,000 hectares. The increase from strong and durum wheat varieties cultivated according to intensive technology totaled more than 14 quintals. The rayon's farms sold 177,000 tons of high-quality grain to the state, which was 70,000 tons more than the annual procurement plan.

Kolkhozes and sovkhozes in Khaybullinskiy Rayon delivered more than 138,000 tons of grain to bins, in Abzelilovskiy Rayon, 95,000 tons, and in Zilairskiy

Rayon, 30,000 tons. All four rayons are located in the zone of the Bashkir Trans-Ural area.

Record harvests of grain crops were obtained on many farms. At one of the departments on the Urtakulskiy Sovkhoz in Buzdyakskiy Rayon yields of winter rye totaled 68.5 quintals per hectare; of spring wheat--on the Unysh Kolkhoz in Dyurtyulinskiy Rayon--(63.2); of barley--on the Kolkhoz imeni Lenin in Buzdyakskiy Rayon--(72.2); of oats--on the Kolkhoz imeni Lenin in Meleuzovskiy Rayon--(61.1); of peas--on the Kolkhoz imeni M. Gafuri in Ilishevskiy Rayon--(41.1); of buckwheat--on the Kolkhoz imeni Kirov in Kumertauskiy Rayon--(23.4 quintals per hectare).

Last year's results have shown that intensive technology contributes to the production of stable harvests of grain crops, especially on farms in Trans-Ural steppes, which have insufficient moistening. Four rayons from an area of 316,000 hectares gave the homeland 436,000 tons of grain, or 14.3 percent of the entire grain procured by the republic.

Applying the intensive method of grain cultivation, farms in the Cis-Ural steppe zone also attained a sharp rise in the yield. For example, grain growers in Davlekanovskiy, Meleuzovskiy, Buzdyakskiy, and Chishminskiy rayons gathered more than 25 quintals per hectare and in Sterlitamakskiy Rayon, 24 quintals. Grain output on kolkhozes in Blagovarskiy, Tuymazinskiy, Yermekyevskiy, and Bizhbulyakskiy rayons increased by 4 to 6 quintals per hectare.

Most farms are adopting not only the intensive technology of cultivation of winter rye and spring wheat, but also of barley, peas, and oats. A number of kolkhozes are already getting ready to transfer groat crops to this method of cultivation.

The results of the last 2 years also became a lesson for us in another matter. Previously, specialists and scientists believed that the conditions of northern and northeastern zones did not promote spring wheat cultivation according to new technology. Therefore, it was not even planned for the farms of these zones--only assignments for the cultivation of winter rye were given. However, life showed that with proper care northern fields could also be highly productive. For example, on the Kolkhoz imeni Amirov in Tatashlinskiy Rayon last year winter rye produced more than 25 quintals and in Gilimshin's brigade on that farm, 35 quintals, which was almost twice as much as with ordinary technology. Barley also had such a yield.

The yield of intensive technology on northern soil could have been much higher if the harvest had not dragged out until the end of October owing to prolonged rain. Consequently, we must decisively alter our idea of old farm specialization and overcome the cautious attitude toward the capabilities of northern zones. The powerful force of accelerating the ripening of ears by topdressing them according to grain development phases is inherent in the technology itself. An acceleration of the growth and ripening of grain is the main support for high harvests under unfavorable weather conditions with a short vegetation period. There can be no further doubts here.

However, one condition is put in the forefront here--all agrotechnological techniques should be used at the optimal time and in a full volume. This concerns not only the sowing and cultivation of crops. Intensive technology also placed serious demands on the organization of harvesting and grain transportation. Short periods demanded other methods of utilizing equipment. The Ipatovo method had to be further developed.

Thus, during a lengthy period, one can say from the beginning of introduction of the swath grain harvesting method, the big gap between harvesting and threshing became its constant companion, leading to considerable harvest losses and to a deterioration in the quality of grain on many farms. That is why all rayon agro-industrial associations created reserve detachments of 20 combines and more, staffed them with mechanization specialists of repair enterprises, who had extensive practical experience, and gave them trucks. The "combine landing party," as rural dwellers began to call them, was sent where this unfortunate gap between harvesting and threshing, threatening a harvest loss, appeared. Having eliminated it rapidly, the shock detachment headed for another kolkhoz or sovkhoz.

In connection with the cool and rainy weather grain crops ripened 2 weeks later than usual. The customary harvesting rhythm was disrupted and harvest tactics had to be changed in the process. When grain crops ripened in southern regions, about 100 people were sent to them for help from farms in northern zones. In 20 days 220 combine operators were transferred from southern regions to the north. Such a watch method of utilizing equipment was applied for the first time and contributed to accelerated harvesting rates and to a reduction in losses.

Furthermore, another innovation introduced by rayon agro-industrial associations also contributed to a regular threshing operation of combines. During past years fully serviceable combines often were forced to stand idle with filled hoppers only because the transport link on the field-threshing floor route was weak and trucks did not ensure smooth harvest transportation. For the purpose of eliminating the bottleneck in the harvesting conveyer, in 1986 more than 4,500 tractor trains were organized for the transportation of grain from combines to threshing floors. A total of 650 accumulating hoppers were made from written off grain harvesting combines. They were utilized as temporary field grain threshing floors. To intensify the rates of grain delivery to elevators, a center for the management of transport operations was established in every RAPO.

At the same time, large motor detachments of heavy-freight trucks were widely utilized last year. This facilitated their technical servicing and grain transportation and, ultimately, the daily output norm increased.

In the structure of harvesting-transport complexes there were more than 11,500 contract links, including 50,000 machine operators working according to a single order. Whereas in 1985 higher wages were paid to them depending on the level of fulfillment of a seasonal norm (from 25 to 100 percent of the basic wages), in 1986 from the first days of mass harvesting they were paid at rates increased by 100 percent.



Such interest greatly increased people's labor activity. For example, Riza Khaziakhmetovich Yakhin, the famous combine operator on the Zilairskiy Sovkhoz-Tekhnikum in Baymakskiy Rayon, Hero of Socialist Labor, also attained outstanding results this year. His family link, in which, along with the father, sons Rashit and Ilfat worked, threshed with three Niva combines more than 63,000 quintals of grain, while it undertook an obligation to thresh 40,000 quintals. They took almost 45 quintals per hectare from an area of 300 hectares. N. F. Galimov's contract link from the Akyarskiy Sovkhoz in Khaybullinskiy Rayon consisting of four combine operators threshed more than 61,000 quintals of grain and F. P. Shestayev's link from the Davlekanovskiy Sovkhoz in Davlekanovskiy Rayon distributed 12,600 quintals of grain per combine from the hopper of three Niva combines. Throughout the republic more than 100 machine operators threshed more than 10,000 quintals of grain and about 1,000 machine operators, 8,000 to 9,000 quintals. Drivers also worked well. For example, I. I. Akhmetdinov, driver on the Rodina Kolkhoz in Davlekanovskiy Rayon, delivered more than 4,200 tons of grain from the field to kolkhoz threshing floors and V. A. Arinkin, driver on the Ashkadarskiy Sovkhoz in Meleuzovskiy Rayon, 2,500 tons.

Last year's results point to the high efficiency of intensification of grain crop cultivation. Kolkhozes and sovkhozes procured a large quantity of durum, strong, and valuable wheat varieties. All additional payments exceeded 200 million rubles.

Now it can be confirmed that, owing to intensive technology and the collective contract based on cost accounting, grain production is truly becoming a highly profitable sector.

At present we are also analyzing the blunders of last year, which, on the whole, was successful. Of course, not everything went smoothly. There were oversights and blunders. There are also serious problems. For example, much time is spent on the preparation of every new combine. Manufacturing plants do not deliver them in very good condition. Next, there is a shortage of technical servicing facilities, especially welding equipment. The industry does not manufacture small mobile vans, baths, or showers. Much time is spent on manufacturing them. There is a shortage of spare parts and highly productive grain loaders.

Northern regions have obtained a relatively low harvest, although they also have advanced farms. We see the potential in cultivating earlier ripening varieties and in giving preference to gray grain crops. The social and economic restructuring of the republic's northern and northeastern regions is also next in turn. In addition to purely economic measures, new housing and projects for cultural and everyday purposes will have to be built here.

Organic fertilizer reserves on hand have been virtually exhausted. Consequently, it is necessary to more actively develop local peat bogs. There are many acid soils, but their liming is proceeding slowly.

It is necessary to undertake with greater energy the solution of the problem of ensuring the stability of grain farming during subsequent years. The results of the harvesting campaign, which have shown a number of shortcomings



in the organizational work of the republic's Gosagroprom, attest to this. For example, control over the work of Baltachevskiy, Blagoveshchenskiy, Belebeyevskiy, and Mishkinskiy RAPO, where harvests are much lower than on farms in neighboring regions operating under the same conditions, has been weakened. Malfunctions in the operation of harvesting-transport complexes have occurred here more frequently than anywhere. This is the result of work done by RAPO and farm managers in the old way, the result of the inert attitude toward the introduction of advanced methods of management into production.

We clearly understand that in the mastering of intensive technology work is still unfolding in breadth. We must deepen it, increase the efficiency of all advanced methods and techniques, and refine the economic mechanism and style of management of the agro-industrial complex.

The republic's farmers began to manifest concern for the harvest of the second year of the five-year plan even during the busy time of the harvesting campaign. After the best predecessors and with an observance of all the requirements of intensive technology winter crops were sown on 500,000 hectares with seeds of the highly productive Chulpan variety. In the fall 112 quintals of mineral fertilizers per hectare were applied and 87,000 hectares of winter crops were treated with fundazol (against the rotting of plants under snow). The condition of seedlings was quite satisfactory. Soil was carefully prepared for the sowing of spring crops. Selected seeds of all crops were stored to the full extent of the need. Now our grain growers have set the goal of bringing all seeds up to the first category of the sowing standard.

By 1990 we envisage increasing annual gross grain output to 6.5 or 7 million tons. Areas under intensive technology are to be brought up to 1.5 million hectares by the end of the five-year plan.

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SEED PRODUCTION, PROCUREMENT PROBLEMS IN BASHKIR ASSR

Problems in Variety Testing

Moscow SELSKAYA ZHIZN in Russian 5 Feb 87 p 2

[Article by N. Tsypyshev, director of the Belokatayskiy State Variety-Testing Station, Bashkir ASSR: "To the Side of the Field: Breeding and Seed Farming"; first paragraph is SELSKAYA ZHIZN introduction]

[Text] In publishing the third letter about the difficulties in the work of the country's state variety-testing stations we hope that seed-farming subdivisions of USSR Gosagroprom [State Agroindustrial Committee] will find the time to answer the newspaper with regard to the essence of the questions that are touched upon.

At present there are 20 state variety-testing stations in the Bashkir ASSR and most of them are in a deplorable state. I asked old workers of the state variety-testing network what type of relationship existed before between stations and the base enterprise and I heard that these relations have been deteriorating from year to year. This problem has grown more acute but no one wants to deal with it. For example, how many resolutions and decisions by the CPSU obkom and the BaASSR Council of Ministers have been written, yet the situation does not change!

Let us look, for example, at the condition of our Belokatayskiy Variety-Testing Station in the northeastern part of the republic. Soon it will be 50 years old. In time we should celebrate its anniversary. But the station does not satisfy us, variety testers. Here's why.

As we know, the variety testing station must make an economic and biological evaluation of new varieties and develop the basic elements of the cultivation technology for the new strain. Alas, the variety-testing station is not carrying out its obligations fully. It is true that the station's specialists are propagandizing the introduction of new, highly productive varieties in various seminars and courses, on the radio and in print, but the practical return on this type of work is very poor. There are reasons for this. One of the main ones is that we do not have our own base, our own arable land.

The Belokatayskiy State Variety-Testing Station, where I have been working for 15 years, is located on the land belonging to Ural Kolkhoz. According to an agreement the kolkhoz is obligated to create the conditions required to carry out variety testing--to provide manpower, machines and agricultural equipment. Obligated indeed! Unfortunately, the base enterprise often does not fulfill these obligations because it bears almost no responsibility for the work of the variety-testing station and is not interested in its end results. A real game of cat and mouse ensues.

The state variety-testing station must deliver all of its products only to the base enterprise and to no one else. Because of the fact that the material-technical base of the station is very poor we deliver the seed we raise without treating it. Since these batches are small the base enterprise feeds them to livestock or runs them through the ZAV-10 or ZAV-20 and transforms them into a mixture. We do not have the right to give the seed to other enterprises although they often request it.

During the 11th Five-Year Plan the Belokatayskiy State Variety-Testing Station provided the base enterprise with 12,000 quintals of grain, including 6,300 quintals of quality seed. As a result Ural Kolkhoz had a net profit of over 200,000 rubles from the 113 hectares of the variety station. In other words, the testers of the Belokatayskiy Station made a considerable contribution to the fulfillment of the Food Program.

Unfortunately, not all reserves which the state variety-testing station has at its disposal are utilized for the good of the rayon's agriculture, which incidentally occupies one of the last places in Bashkiriya in terms of seed quality. The state variety testing station turned out to be to the side of the field, but many do not and do not wish to understand this. The conservatism of habit is evident in everything. It is becoming more and more difficult to adhere to the technology for individual agrotechnical techniques for production crops, let alone to introduce a new non-mouldboard system of soil cultivation although 90 percent of the land in the rayon is eroded.

The administration of Ural Kolkhoz diverges from the fulfillment of its contractual obligations more and more frequently. The equipment in the state variety-testing station is antiquated, the storage facilities are primitive, there is a great deal of manual labor and there is a shortage of manpower.

During each of the last three five-year plans the obkom buro and the Bashkir ASSR Council of Ministers have passed resolutions on improving the material-technical base of variety-testing sections; it was on the basis of these resolutions that the Belokatayskiy CPSU Rayon Committee and rayon executive committee made their decisions, but matters did not progress beyond words.

Under such circumstances it is extremely difficult to deal with the planned program. Only through the selfless efforts of specialists is it possible to carry it out, but not in the best way possible. Sometimes matters become very odd. In 1983 the Belokatayskiy Variety-Testing Station produced an excellent harvest (36.5 quintals per hectare) and for the first time occupied second place among 20 variety-testing stations in the Bashkir ASSR! We became members of the USSR VDNKh [Exhibition of Achievements of the National Economy

of the USSR], and received the Banner of the RSFSR and bronze medals at the exhibit. At the same time the base Ural Kolkhoz was awarded a prize of 500 rubles that was earmarked for the GSU [State Variety Testing Station]. How many nerves this prize ruined! The kolkhoz administration decided to show that it was higher than any authorities and did not give out the prize for a half year. Only after the trade union obkom stepped in was the conflict solved in favor of the specialists of Belokatayskiy GSU.

But relations between the station and the base enterprises deteriorated even further. Neither the party raykom nor the RAPO are striving to improve it. With the arrival of A. I. Kukayev as the new RAPO head the situation has become worse. First our monetary resources for the acquisition of mineral fertilizers were curtailed twice and this year our area of arable land has been doubled although the material-technical base of the variety station has remained the same as it was 10 years ago! As director of the GSU I do not understand this type of approach--everyone speaks about intensive farming systems, but we are being placed on a lower level.

Is it any surprise that we cannot retain specialists--they all leave. It is extremely vexing to think that one's work is not needed by anyone.

#### Attention to Seed Farming Urged

Moscow SELSKAYA ZHIZN in Russian 21 Mar 87 p 1

[Article by V. Orlov, SELSKAYA ZHIZN correspondent, Bashkir ASSR: "In Nobody's Field"; first paragraph is source introduction]

[Text] It has turned out that seed farming of grain crops is in nobody's field in a number of rayons of the Bashkir ASSR. How can this situation be corrected?

The kolkhozes and sovkhoses of the Bashkir ASSR are preparing over half a million tons of grain and legume seeds for spring sowing. They are preparing them in different ways. Some were able to acquire choice seed and are now carrying out the final operation prior to moving out into the fields--seed disinfection. Others are hurrying to complete cleaning and drying of seed and to improve their commercial and sowing qualities. In general only 37 percent of the seed that has been prepared is first class.

In the granaries of every third rayon in the autonomous republic only 5-15 percent of the seed is first class. And work involving the exchange, warming and disinfection of seed is an uncharted area. In this way the strength of the seed earmarked for sowing according to intensive technology is in doubt from the very beginning. Poor quality seed cannot but affect the end results, productivity and finally, the condition of seed farming as a whole.

Yes, in order to have at least minimal order in storehouses today it is necessary to proceed with immutable laws such as strain changing and strain renewal. We became convinced of this in the enterprises of the southern rayons--Kumertauskiy, Meleuzovski, Kugarchinskiy and Zianchurinskiy. In the first two the amount of first-class grain equals only half of the prepared



seed funds whereas the farmers of Kugarchinskiy and Zianchurinskiy rayons, which have set the tone in priority work, will put quality seed on three-fourths of their area. But even here things are far from being completely satisfactory.

Let's look at neighboring kolkhozes--Kolkhoz imeni Khudayberdin and Kolkhoz imeni M. Gorkiy, which last year shared the prize for productivity of grain crops. The former produced 30.2 quintals of grain per hectare; the latter--4 quintals less. The difference is based on the different seed used.

In Kolkhoz imeni Khudayberdin there are none of the usual grain-cleaning and drying complexes near threshing floors and storehouses. Nevertheless, a solution was found. Complexes are successfully replaced by OVP-20, OVS-21 and SM-4 seed-cleaning units which have been placed into a single technological line. The cleaning of seed using such lines enables the enterprise to produce seed of the necessary condition during the period of mass procurement without any readjustments or obstacles in the sequence of work. They were able to achieve this during the last 2 years and now 95 percent of the 660 tons of seed that have been stored is first class.

To that which has been said we can add that in 1984 Kolkhoz imeni Khudayberdin was satisfied with a yield of 13 quintals. Growth began when 76 percent of the seed was brought up to first class standards for the first time. At the same time serious attention was directed at strain renewal. For example, this year batches of oats and peas seed of the first reproduction were acquired--they are procured for an entire field, for an entire storehouse, in order to avoid mixing strains and infecting crops with diseases.

The problems of strain renewal, the cleanness of crops and strain changing are of special importance today to the enterprises of Bashkiriya. After all, the republic's grain farmers are increasing the area in grains cultivated according to intensive technologies to 1,232,000 hectares--by 36 percent. Thanks to this they expect to produce an additional ton of grain per hectare. However, the introduction of the innovation is sliding along due to the lags in seed farming. In this link a type of nobody's region has developed. Whereas the use of technology is being carried out with the direct participation of Bashgosagropromkomitet [Bashkir ASSR Agro-Industrial Committee] and its numerous services, at best the agronomic services of kolkhozes and sovkhoses and the RAPO are responsible for the development of seed farming. And the transition to the next, higher class of intensive farming has been roundly hindered.

Let's return to Kugarchinskiy Rayon's Kolkhoz imeni M. Gorkiy which we mentioned above. The reproduction capability of seed grain here is not uniform by far. Saratovskaya-36 wheat, for example, is represented by 300 tons of seed of the fourth reproduction; 200 tons of seed peas include seed of the seventh reproduction. This type of "circulation" will have a negative effect on the harvest. The chairman of the administration, A. L. Ivanov, states:

"Brigade 3 sowed the Chulpan variety of winter rye on 380 hectares. One side of the forest strip we used seed of the first reproduction and on the other--of the fifth. In general, the suggestions of the developer of the well-known variety, S. A. Kunakbayev, concerning the fact that varieties of the intensive types are most active in the first reproductions, were ignored. The situation that existed in the enterprise involving carryover funds of winter crop seed made this necessary. What was the result? The first half of the field yielded 47 quintals of grain per hectare, and the second--36. Things could not be otherwise for we receive elite seed in small handfuls. And we have to work according to the system of orders!"

Unfortunately, orders for seed of the best varieties and highest reproductions are not taken by anyone in the Bashkir ASSR. This kind of seed is divided depending upon availability. In Kugarchinskiy Sovkhoz of the 2,100 tons of existing seed, a good half needed to be replaced due to the loss of quality. But it was not possible to obtain even a single kilogram of elite seed of promising varieties such as Zhnitsa spring wheat, Pervenets barley, Drug oats and Truzhenik peas. And we do mean obtain, not purchase or get. The foundation for intensive technology is very undependable in Kugarchinskiy Sovkhoz for the next few years. This is true not only for this sovkhov, but for the rayon as well.

The situation is no better for their neighbors. R. Zozulenko, inspector of the State Seed Inspectorate of Fedorovskiy Rayon, reports: "Only 40 percent of our seed is first class. The agronomists of all enterprises know that four months after analysis seed must pass a complete second analysis. But the majority of specialists leave this matter until the very last moment." Actually, why rush when everything is known ahead of time? For example, we know that the productivity of spring wheat, let us say, varies according to the quality of seed and agrotechnology in enterprises from 17 to 41 quintals, and of peas--from 12 to 32 quintals. We know that in seed storehouses no improvements have occurred during the winter, not counting small batches which have been allocated for exchange from state resources. This is the direct result of the old practice when the RAPO was concerned only about well-being expressed in figures.

I would like to suggest to those who enthusiastically count increases in yield achieved as a result of the use of intensive technology that they compare these increases to losses resulting from the underestimation of seed farming. These losses are destructively reflected in the entire grain field and throw their shadow on the good name of grain farmers.

The plan of measures on accelerating scientific-technical progress in the agro-industrial complex of the republic contains this point: "To improve the work of seed-farming enterprises during the current five-year plan, to create insurance funds in them in a size that will guarantee the production of marketable grain crops using seed of no less than the fourth reproduction." Bashgosagropromkomitet, having written this, has taken upon itself the obligation of becoming involved in this important problem. It is time and it has long been time to deal with it seriously and to move from words to actions.

## STATE HOUSING ACCEPTANCE INSPECTIONS FAULTED

Moscow STROITELNAYA GAZETA in Russian 6 May 87 p 1

[Article by M. Ziborov, commentator: "Housing and State Acceptance"; first paragraph is source introduction.

[Text] "I have heard that in some of our oblast's cities some housing was built so poorly that a portion of them had to be dismantled. Is this possible? Or are these rumors?--S. Maximoz." Kuybyshev.

No, Sergey Vasilyevich, they are not rumors. Actually, inspectors of Gosarkhstroykontrol [State Inspectorate for Architecture and Construction] of Gosgrazhdanstroy [State Committee for Nonindustrial Construction and Architecture] have found serious violations in the erection of several apartment buildings in the oblast's cities. As the inspection reports noted, a large number of "critical defects" could have led to the loss of the buildings' structural integrity....Simply speaking, these buildings could have collapsed. So, the floors of apartment houses that had been erected with violations of the rules were dismantled in Kuybyshev, Syzran, Togliatti and Novokuybyshevsk at the order of GASK [State Inspectorate for Architectural and Construction Affairs].

You ask: how could such a thing happen? How did qualified construction workers commit these "critical defects," while the engineers responsible for their work calmly watched them? These questions deserve separate answers, and we shall soon return to them. Right now I would like just to confirm a fact: housing-construction quality in Kuybyshev Oblast is extremely low. I shall cite the results of that same inspection by staff workers of Gosgrazhdanstroy's GASK. Out of 35 jobs that the inspectors visited, no unfinished work or defects (substantial ones, that is) were found at only two, both of them being among the 26 that were accepted by the state commissions for operation. And of the 9 buildings still under construction, not one was free of defects.

We have also received notices about gross violations of construction technology from other places. Here is what G. Konovalov, an operations superintendent for more than 30 years, writes us from Odessa:

"At one of the two-story buildings, the commission found that the first floor was 'especially mishap-prone,' while the second was suitable for housing. And the orders were given to new residents to move in. But if the

load-bearing capacity of the first story's walls were exceeded, then what would hold up the constructional structure of the second floor, which had been called suitable?"

Certainly, it is not necessary to explain that such reports are the most worrisome of all. However, these were extreme cases, a limit below which there is no place to go. Most of the defects do not threaten our safety but detract from health and degrade living conditions in small ways.

Numerous letters that have come to the editorial office indicate that a great multitude of apartment houses with such unfinished work are accepted for operation. Gosarkhstroykontrol inspections alone found 168 apartment houses that had been introduced in the fourth quarter of last year which could not possibly be recognized as ready for habitation (that is why they were excluded from the reporting).

This is not the first year we have spoken about the quality of housing erected, but things have not changed for the better, unfortunately. Why does this happen? One can answer definitively: good intentions--to build better--have not been fortified for a long time with realistic deeds, by organizational, equipmental and technological measures. In the pursuit of favorable indicators we have gradually devalued the concept itself of high quality for our housing. The builders, jointly with local organs of authority, often try at any price to shove the housing into operation and to report that the plan has been fulfilled.

For example, last year Glavturkmenneftegazstroy [Main Administration for the Construction of Oil and Gas Industry Enterprises in Turkmen SSR] of Minneftegazstroy [Ministry for the Construction of Petroleum and Gas Industry Enterprises] three times--in the first, third and fourth quarters--included in the so-called "on-time report" apartment houses not accepted by state commissions. That is why, after reporting plan fulfillment, it quietly asked, in letters to the republic's TsSU [Central Statistical Administration], that they be excluded from the reporting.

Certainly, a bilateral tie exists here. On the one hand, the low quality of construction forces the guilty production supervisors to look for loopholes in order to get around the barriers that prevent turnover of standard housing, and, on the other hand, the existence of these loopholes themselves does not do much to encourage subunit supervisors to seek ways to improve the soundness of their product. It is, by its very nature, a vicious circle, the way out from which may be that of increasing exactingness during the acceptance of housing for operation, and this will entail also improvement in the erection of housing.

The new procedure that was introduced this year for evaluating the quality of housing and of nonindustrial facilities should be designed to aim precisely at this. Now, as is known, the old "school" evaluations are no longer given--there are neither "fives" nor "threes." There is one criterion--conformity of the housing to the design and the Construction Norms and Regulations. The idea is, in essence, excellent. There should be no housing with a "three," and with a minus at that. All housing should meet the standards unconditionally. But....



In a conversation with the abovementioned chief of quality inspection of Glavkuybyshevstroy [Main Administration for Construction in Kuybyshev Oblast], I heard this argument: all the housing turned over previously should have met the requirement of the Construction Norms and Regulations, even those which were given a "three." That is why, he said, there is nothing new now. And according to the logic of my collocutor, it turns out nowadays that the requirements for housing accepted for operation are automatically reduced to the former "three" level.

But here is another point of view. At a meeting of Gosgrazhdanstroy on questions of quality, an authoritative specialist openly declared that if, let's say, housing last year had been judged in accordance with current criteria, then 80 percent of the housing would have had to be rejected.

As we see, interpretation of the new rules for evaluating housing quality is ambiguous. Many specialists, for example, do not say how to determine the conformity of a finished job to the Construction Norms and Regulations: is it really possible to actually check, in a building that has been erected, the fulfillment of those numerous demands that the "whole hundred volumes" of these standards booklets make on it?

And so the point system has been canceled, and the new principles for evaluating finished facilities have gone into effect. However, not everything here has been thought through to the end, and not everything is accurately and clearly defined. One cannot, of course, be reconciled with such a situation. And so specialists of USSR Gosstroy, Gosgrazhdanstroy and the scientific and research institutes subordinate to them must help the builders find clarity in defining the criteria for quality. Possibly, some kind of additional consolidated standards or instructions will have to be developed for this purpose. The main thing is that, in no way is it possible to set aside the solution of this problem.

Our mail includes many letters in which the readers propose a reliable way to increase the quality of the housing being turned over--introduce state acceptance at the construction site. Here also, however, opinions have been divided. The opponents of state acceptance at the site justify their point of view by the fact that today's state commissions are not a departmental organ. Why, then, have another check by a nondepartmental organ? Proponents of state acceptance consider, on the contrary, that the commissions, because of parochial interests, cannot give an objective evaluation, and, for the sake of the report on introducing housing, will completely disregard the interests of the residents of their city. Surely, this dispute can be resolved by an experiment, introducing state acceptance of housing in one or two cities of the country.

Radical improvement of the construction product is an indisputable part of the solution of the country's housing problem. The CPSU Central Committee and the USSR Council of Ministers Decree, "Measures for Insuring Fulfillment of Tasks for Developing the Materials and Equipment Base for the Social and Cultural Sphere That Have Been Approved for the 12th Five-Year Plan," which was published yesterday, calls for housing construction to increase, from the 595 million square meters called for by the previous five-year plan, to 630 million square meters. It stands to reason that this quantitative growth

of the construction program, which testifies to the untiring concern of the party and the government for the welfare of the Soviet people, does not give the right to any relaxation in the quality level of the housing that is turned over. Each family should obtain an excellent apartment of good quality.

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## OIL AND GAS TRADE UNION CHIEF DISCUSSES REORGANIZATION

Moscow NEFTYANIK in Russian No 1, 1987 pp 2-11

[Article by V. T. Sedenko, chairman of the trade union of workers of the oil and gas industry: "Reorganization -- Demand of the Times"]

[Text] The third congress of the trade union of workers in the oil and gas industry is being held during a crucial stage when the work on the realization of the historical resolutions of the Twenty-Seventh Party Congress and the achievement of new qualitative state of the Soviet society along the path of the acceleration of socioeconomic development of the country is in full swing. Revolutionary changes are gathering strength everywhere, and the entire society became active. Positive changes are taking place in the economy, social relations and spiritual life. The working people of the country are beginning to understand that the more conscientious and creative, disciplined and organized the Soviet people are, the more powerful and wide will be the creativity of the people.

The needs of the present period of great changes determine the content and form of the trade-union work. As M. S. Gorbachev said at his meeting with active party members of the Krasnodar Kray: "We cannot live and work, think and act as before. Without reorganization we cannot solve the problems we set for ourselves and cannot accomplish the tasks set by the Twenty-Seventh Party Congress." This period is characterized by wide openness, open discussion of the most burning problems, democratization of our society, intensification of the struggle for social justice and against negative phenomena. To consolidate the changes, making them irreversible, to utilize the entire huge intellectual and moral potential of the people, to stimulate creative potentialities and initiative of each worker, to help everyone realize that there is no and cannot be other paths to acceleration besides reorganization are the immediate goals of the work of trade union in the masses.

It is known that a great goal engenders great energy. The wind of changes is favorable to active people. It makes one think creatively, to solve the arising problems in a new way and guides one in the direction of intensive creative work. However, when working in the new conditions, it is important to make better use of the vast supply of activities, experience, initiatives, forms and methods of work accumulated during previous years. It is impossible to move ahead without creative comprehension of what was done before. Therefore, it is important to analyze thoroughly and evaluate critically our own activities, the

work of the primary trade-union organizations and committees of the trade union, to determine what has been achieved and to map out concrete ways of enhancing the role of the sectorial trade union in the materialization of the party's policy.

During the past years, we have achieved further numerical growth and organizational strengthening of our trade union. The style, forms and methods of its activities have been improved, and there has been some improvement in the work of trade-union agencies in solving the problems of production, labor, living conditions, relaxation and education of the workers.

Primary attention of the Central Committee of the trade union in the area of mass production and economic work was concentrated on increasing the initiative and labor activity of the workers of this industry in the struggle for successful fulfillment of the plans and socialist pledges, acceleration of socioeconomic development, increasing the effectiveness of production, quality of products, realization of contractual obligations and conservation of resources. The most responsible and important among the multitude of trade-union matters is the organization of socialist competitions, the significance of which is becoming more and more obvious. To activate the mobilizing moral potential of competitions means to make fuller use of one of the most powerful tools of trade-union influence on the course of the fulfillment of the party's program for our accelerated progress. What was done during the last period for improving the forms and fuller and effective realization of the organizing force of labor competition? Taking into consideration the special characteristics of the present time the Central Committee of the trade union, jointly with the ministries are doing their best for the great mobilizing potentialities of competitions not to be ruined by bureaucratic formalism but to be realized fully and significantly in everyday productive activities, not to be limited to abstract discussions but to be concretized in application to the special characteristics and practical tasks of each working group. Of course, the changes occurring in the country by themselves give a favorable "food" for the growth of labor enthusiasm. However, the activation of social consciousness and creative efforts of the masses depends greatly also on the reorganization of the forms of the organizational and educational work. As experience has shown, there is a wide field of activity in this area. Our duty is to bring the innovative ideas of the Twenty-Seventh CPSU Congress to each worker and fully inform the people regarding the tasks set by the congress. Today, we should not allow for the high principles of socialist competitions to be presented in a boring, formal, bureaucratic way. Flexibility, democratism, faith in people, efficiency, unity of word and deed are the necessary conditions for improving the work of trade-union organs in working groups. It is important for the appeals for initiative, independence and boldness not to be at variance with reality, for people who are truly active and inquisitive to be put in the most favorable conditions. We try to help such people, to foster their ability to think and act in a creative way.

For these purposes, we commended working teams of our sectors for their valuable initiative, conducted sectorial reviews and competitions on the most urgent problems of improving production effectiveness and constantly gave on-site help to teams in organizing labor competitions. The Trade Union Central Committee, jointly with the Tyumen Oblast council of trade unions, organized a competition of teams of related enterprises and organizations for successful fulfillment of the tasks in the development of the oil and gas complex of the Tyumen Oblast in 1986-1990.



Special-purpose competitions which were started during the Eleventh Five-Year Plan and proved to be important and viable were developed further. For example, the competition organized during the last five-year plan by the Ministry of the Gas Industry and the Trade Union Central Committee for increasing the output and improving the quality and variety of consumer goods contributed to successful fulfillment of the plans and socialist pledges. In five years, the workers of the Ministry of the Gas Industry overfulfilled the plan for the production of cultural and household goods amounting to over 23.6 million rubles.

During the period under review, the problems of competitions and mobilization of workers for the fulfillment of plans and socialist pledges were constantly in the center of attention of the Plenums of the Trade Union Central Committee and meetings of the presidium. They were submitted for consideration of joint boards of sectorial ministries and the presidium of the Trade Union Central Committee and were discussed at group and sectorial conferences, All-Union schools for the exchange of advanced experience, etc.

These are useful measures and they bring good results. Judging by their form, everything seems to be in order: openness, mutual exchange, evaluation of the results, rewards... But what is the actual situation? Unfortunately, we cannot say that everything is going smoothly everywhere if we consider the final production results as a determining criterion. The reorganization taking place in the country depends on reorganization in the thinking of the people and their psychology. There still are quite a few workers which are held back by their habit to live in the old way, wait for measures "from above", set their hopes on the administration and administrative orders. Some people are reasoning as follows: let competition be organized by those who are suppose to do that. In other words, let "the bosses" do all that, it does not concern us... We are losing a lot in competition due to such unscrupulousness and passiveness "from below".

The resolution of the CPSU Central Committee which approved the initiative of the leading teams of the country headed by V. M. Gvozdev, A. P. Potapov and V. L. Sidoreyko obligates us to organize its wide discussion and support in working teams, to develop and make higher pledges in honor of the seventieth anniversary of the Great October Revolution, and to spread a mass movement for increasing labor productivity. Unfortunately, many people did not take very seriously the idea of spreading this valuable initiative. By the middle of October 1986, it was supported by more than 3600 teams of leading professions in our sectors. However, this figure cannot satisfy us at all. The Turkmen, Tajik, Azerbaijan republican committees, Kharkov, Gorkiy oblast committees of the trade union, trade-union committees of the associations "Varyeganneftegaz", "Uzbekneft", "Kubanmorneftegazprom", "Soyuzburgaz", "Privolzhskgazpromstroy", organizations and enterprises of Glavneftegazpromstroy and a number of other organizations did not start this work until October of last year. Many people believe that only drilling enterprises should disseminate this initiative. In other words, many working groups give various excuses instead of conducting creative work.

I would like to stress that the organization of the competition imposes many responsibilities on each of its participants. This requires concrete actions of each worker, each team, and not waiting until the administration does something about it. The personnel of the Mirnyy UBR [Drilling Department] treated the dissemination of the patriotic initiative of the teams headed by V. Gvozdev,

A. P. Potapov and V. F. Sidoreyko seriously and in a businesslike way, and I would even say, in the spirit of acceleration and reorganization. Several drilling foremen from this administration visited Sidoreyko's team and familiarize themselves with the secrets of their work. The results of their trip were discussed in UBR and the sixteen teams of that department made high pledges. It is notable that the goals of some of the teams of the Mirnyy UBR for the end of the five-year plan are considerably higher than those of the Sidoreyko's team.

Such approach to the dissemination of experience of outstanding workers made it possible for Mirnyy UBR to propose an increase in the drilling plan in the Twelfth Five-Year Plan by 995,000 meters and to request its approval as a counter plan without increasing the number of drilling teams.

If we speak about the fulfillment of the program of measures for further improvement of the organization of competition, the study and dissemination of advanced experience in the sectors during 1981-1985 in terms of figures, then we get an impression that everything seems to be progressing well. Main administrations, associations and enterprises organized schools for exchanging advanced experience at various structural levels of production, including on the basis of winning teams of the All-Union Socialist Competition. Naturally, it is simply impossible not to have such a school on the basis of the famous Surgut team headed by V. L. Sidoreyko. It was organized by joint resolution of the administration and the trade-union committee of "Surgutneftegaz". However, it appears that the dissemination of experience there is based strictly on Sidoreyko's personal initiative and of those drilling workers who come to him at their own will.

I did not give this example with the purpose of belittling the work of economic and trade-union agencies of Tyumen in the dissemination of patriotic initiatives. I did it simply because this fact clearly shows what serious errors are awaiting those who linger with the reorganization of socialist competitions to ensure the realization of new requirements and approaches in this important matter.

The potentialities of skillful organization of competitions and dissemination of advanced experience are convincingly shown by the achievements of outstanding workers. Guided by the resolutions of the twenty-sixth and Twenty-Seventh Party Congresses Plenums of the CPSU Central Committee, Seventeenth Congress of USSR Trade Unions and the second congress of the sectorial trade union, administrators and trade union organizations conducted systematic work at enterprises under the direction of party agencies in the mobilization of workers for the fulfillment of the state plans and socialist pledges.

For example, on the third of December 1985, the workers of the gas industry completed the fulfillment of the planned tasks of the Eleventh Five-Year Plan in the extraction of gas and other important technical and economic indexes ahead of time. They achieved an increase in the extraction of gas of 205.6 billion cubic meters in 1985 in comparison with 1980, labor productivity increased by 26.8% and the above-plan profit amounted to 3.1 billion rubles.

Minneftegazstroy [Ministry of Construction of Petroleum and Gas Industry Enterprises] workers also completed the planned tasks of the last five-year plan ahead of time. The volume of construction and installation jobs was exceeded by 48% in comparison with the level achieved in the Tenth Five-Year Plan, and by

68% for Western Siberia. They put into operation 62,000 kilometers of main pipelines, 318 compressor and oil pumping stations, 3.9 million cubic meters of oil capacities, gas-processing plants for a total capacity of 10.5 billion cubic meters, 18,000 kilometers of cable and radio relay communication lines and other production facilities and structures. Six main gas lines from Western Siberia to the European part of the country were completed ahead of time.

Workers, engineers, technicians and employees of many enterprises of the Minnefteprom [Ministry of the Petroleum Industry] worked successfully during the Eleventh Five-Year Plan and achieved high production indexes. They included the associations "Yuganskneftegaz", "Surgutneftegaz", "Kuybyshevneft", "Ukrneft", "Permneft" and others.

At the same time it should be mentioned that the Minnefteprom underproduced more than 40 million tons of oil in the last five-year plan. This was chiefly due to a serious derangement in the work of the Glavtyumenneftegaz, where insufficient attention was given to the well stock and measures for their conversion to mechanical extraction were not implemented. Moreover, the stock of temporarily shut-down wells was much higher than the norm; there was serious lag in the development of new fields. The goal of the Eleventh Five-Year Plan for drilling development wells was not fulfilled (in Tyumen Oblast by 6.6 million meters).

In the gas industry, a number of teams lagged in the volume of sales on the basis of the tasks and delivery commitments and did not fulfill the plan for well drilling.

By the results of the last five-year plan, Minneftegazstroy did not ensure the introduction of eleven compressor and pumping stations, and 559,000 cubic meters of oil capacities. Almost 40% of the construction enterprises of this ministry did not fulfill their five-year tasks. They did not deliver a considerable amount of prefabricated reinforced concrete structures and parts, lumber and non-metallic materials.

At the present time the ministries and the Central Committee of the Trade Union, economic and trade-union agencies have an important and difficult task of eliminating the above defects in shortest possible time, achieving a new qualitative level in the development of the industries, creating reserves for the future and ensuring a sharp turn in the thinking and approaches to the solution of the problems.

At the present time primary attention is given to the overall development of the West Siberian oil and gas complex which, as M. S. Gorbachev said in his speech of 6 September 1985 at the conference of active party members and administrators of the Tyumen and Tomsk Oblasts, "is the heart of the oil and gas producing industry, the fundamental sectors of our economy, and its work pace determines to a considerable extent the progress of the entire national economy and affects the foreign economic ties of the country".

The production of oil and gas condensate in that region in 1990 must exceed 420 million tons, and that of gas 575 billion cubic meters. In the Twelfth Five-Year Plan, it is planned to construct surface facilities for at least 60



new fields, to construct five gas processing plants, 7,000 kilometers of gas pipelines and product lines for transporting petroleum gas and products of its processing.

It is planned to put into operation five complex gas treatment plants at the Urengoy gas condensate field and ten plants at the Yamburg field. At the Yamal Peninsula, it is necessary to prepare capacities by the beginning of the next five-year plan for extracting 35 billion cubic meters of gas a year.

The volume of jobs to be done by the Minneftegazstroy during the years of the Twelfth Five-Year Plan in Western Siberia will amount to 23.7 billion rubles and will increase by 1.6 times against the Eleventh Five-Year Plan. The portion of jobs for the West Siberian oil and gas complex in the total program of the ministry will increase from 55% in 1985 to 65% in 1990.

In order to achieve the goals, the attention of economic agencies and trade-union organizations must be constantly focussed on cardinal acceleration of scientific and technological progress, the key factor of intensification. This was concretely reflected in the tasks of the Twelfth Five-Year Plan. For example, investments in the machine-building industry on which depend the effectiveness and pace of economic growth will almost double.

Rapid development of the gas industry is ensured primarily through the introduction of new equipment and advanced technology, as well as construction of modern enterprises and facilities.

In the oil industry, work was continued on increasing the oil recovery of the strata, particularly at the Samotlorskoye field. A considerable amount of work was done on the automation of control in oil pipeline transportation.

Concrete tasks of trade-union organizations in the realization of the party's aims with respect to the acceleration of scientific and technological progress were defined at the Fourth Plenum of the Trade Union Central Committee. Measures were planned and are being implemented for the mobilization of scientific and technical community for the fulfillment of the plans for the introduction of new equipment and realization of scientific and technical programs. There are over 21,500 creative public associations with 146,700 people functioning in the industries.

The organizational work contributed to the successful fulfillment of the plans for the introduction of new equipment and scientific and technical programs by the workers of many enterprises of the Mingazprom, Minnefteprom and Minneftegazstroy.

Our task is to activate the creativity of the masses as much as possible, to ensure a qualitatively new approach to the implementation of measures for the acceleration of the scientific and technological progress, and to remove formalism and inertness from this work. Unfortunately, it is still impossible to do this everywhere. The Minnefteprom has not been able to achieve a number of basic technical and economic indexes chiefly due to unsatisfactory work of the PO [production association] "Varyeganneftegaz", "Noyabrskneftegaz" and enterprises of PO "Tatneft" operating in Western Siberia.



During the last five-year plan, the Minnefteprom did not fulfill 105 tasks of the State Plan for the Development of Science and Technology, the Mingazprom -- 26 tasks and the Minneftegazstroy -- eight tasks. Not everything was fine in the first year of the current five-year plan. During the first six months of 1986, the Minnefteprom was unable to complete four assignments of the All-Union scientific and technical programs. The Mingazprom did not complete one assignment for the introduction of new equipment and two scientific and technical programs.

The work on the study and disseminating everything new and advanced requires more attention. Trade-union committees and trade union committees of associations, enterprises and organizations must implement measures for raising the level of guidance of management boards and councils of the primary organizations of MTO [scientific and technical societies], activation of work of creative public associations, giving them the necessary aid in concluding and realization of agreements on creative cooperation of the academic, vuz and sectorial science with production.

It is known that the quality of the products is a concentrated expression of the level of our entire work. Quality is the final result of all our concerns and efforts. Acceleration of the scientific and technological progress is impossible without high quality. Speaking of this important aspect, we must not deceive ourselves and admit frankly that the level of work on improving the quality of products does not meet present requirements at a number of enterprises. For example, in the Mingazprom, nine gas equipment plants of the VPO "Soyuzgasmashapparat" do not produce a single high grade item. Gross violations of technological discipline and nonobservance of the requirements for standards have been revealed at the Volgograd and Ashkhabad gas equipment plants. Planned assignments for the production of highest grade products have not been fulfilled in the course of a number of years by the Mubarek GPZ [gas processing plant] of the "Soyuzuzbekgazprom" association. There has not been any improvement in the quality of gas treatment at the fields of the association "Turkmengazprom", and at some fields this indexes are even decreasing.

In the Minneftegazstroy, in spite of the fact that the frequency of failures in pipeline testing decreased to one half during the Eleventh Five-Year Plan in comparison with the Tenth Five-Year Plan, there are still many instances of spoilage and violations of construction norms and rules. For example, during the construction of the Yamburg-Yelets-1, the Glavtruboprovodstroy had faulty ceiling joints, which delayed the completion of the project by two months.

In the Minnefteprom, in spite of the improvements in the quality of oil treatment, there are instances when substandard fuel is delivered. In 1981-1985, more than 450 wells were abandoned due to technical reasons. Drilling organizations in Western Siberia have 253 damaged and rejected wells.

Quality improvement is a common task for the entire people. Trade union organizations are called upon to mobilize initiative and creativity of the workers for its solution, to persistently develop and expand the tradition of respect for labor and to foster the feeling of zealousness and thriftiness.

Being concerned about quality, we cannot be careless and wasteful. This trinity, quality, discipline, thriftiness, is inseparable. Trade-union organizations must do everything possible for the economy to be truly economical.

It was stressed at the Twenty-Seventh Party Congress that the changeover of the national economy to the intensive path of development requires maximum mobilization of all available reserves. The ability of careful management is the most important of them. The advantage of being thrifty is that thriftiness does not require any additional material expenditures or extra manpower. All of us have this quality, it is only important to remember about it every day, every hour, and for everyone to observe it. The last five-year plan showed quite a few examples of thrifty management of the national resources by many organizations.

In the course of the All-Union public review of effective utilization of raw and other materials and fuel and energy resources in the Eleventh Five-Year Plan, about 406,000 proposals were submitted by the workers for the conservation of resources. By using more than 350,000 proposals, it was possible to obtain a conventional annual saving in the amount of over 706 million rubles.

As a result of the mobilization of the workers for the conservation and careful use of resources, in five years about 199,000 tons of rolled ferrous metals, 519,000 tons of cement, 11.2 billion kW-h of electric power and many other resources were saved.

In spite of certain positive results achieved during the period under review, we were still unable to involve all workers in the competition in economy. For the Mingaztorm, approximately 17% of individuals and teams participated in the competition in 1985; in the Minnefteprom -- about 13%, and in the Minneftegazstroy -- less than 10%. This situation must be corrected.

It should be recognized that tremendous reserves in increasing not only thriftiness but also the intensification of production and growth of labor productivity still remain unused. For example, during the Eleventh Five-Year Plan, the oil drilling in V. Sidoreyko's team of the Surgut UBR [Drilling Department] No 2 mentioned above increased from 100,000 m in 1981 to 120,000 m in 1985. However, the average well drilling per team at the Glavtyumenneftegaz remained at the same level during the entire five-year plan. What does this mean? This means that there was no systematic and persistent work on the study, generalization and dissemination of advanced production experience. In spite of their padded reports, the final result indicates that neither the Glavk [Main Administration], nor the Tyumen Oblast Committee of the trade union were seriously engaged in the dissemination of advanced experience.

Special attention should be given to work without laggards. Such organizations as the "Kuybyshevneft" association have accumulated abundant experience in helping lagging workers. This includes transferring outstanding foremen to teams which regularly fall behind in the fulfillment of plans, to give them support and encouragement. This experience should also be developed and improved. It appears that the ministries and the Central Committee of the trade union should work out a system of incentives for those who succeed in helping a lagging team.

Since 1984, the Central Committee of the trade union, jointly with sectorial ministries, have been working on increasing the effectiveness of the utilization of capacities, improvement of labor conditions and increasing labor productivity on the basis of evaluations of work places and their rationalizations.

Within the Mingazprom, 29,920 work places of industrial personnel were evaluated. In 1985, 1212 places were rationalized and 291 work places were eliminated at the enterprises of this ministry as a result of evaluations.

Some work in this direction was done at enterprises of the Minnefteprom and Minneftegazstroy. These measures were implemented most actively at the gas equipment plants of the VPO "Soyuzgazmashapparat" and in the association "Ukrneft".

At the same time, analysis performed by the workers of the Central Committee of the trade union at the enterprises PO "Nizhnevartovskneftefaz", PO "Yuganskneftegaz" and in organizations and enterprises of the Ukrainian and Belorussian SSR, Stavropol Kray, Tatar ASSR and others, showed that evaluations of work places did not yield the expected results. Why was that? First of all, because there were instances of nonintegrated approach to the evaluation of work places, selection of vague lower criteria for their evaluation with respect to modern requirements. A number of organizations did not organize training in the principles of conducting this important work and this work was done without the participation of primary organizations of NTO and VOIR [All-Union Society of Inventers and Efficiency Experts].

Such instances should be evaluated properly everywhere and corrected. Trade union committees and administrators of enterprises must more boldly and fully use all possibilities for involving the workers in effective realization of measures for the evaluation and rationalization of work places.

It is well known that on 1 January 1987 our industries are switching to new conditions of management. This obligates us to learn to be flexible, efficient and able to make nonstandard decisions, since routines and inertia are the worst enemies of progress. Now, economic and trade union bodies must concentrate their attention on organizing the work in a new way based on increasing the effectiveness of centralized management and considerable expansion of economic independence of associations and enterprises. We should change the direction of the management mechanism, make it less expensive, aiming it at the improvement of quality and effectiveness, acceleration of scientific and technological progress and enhancing the role of social factors.

The Party has set a goal of great social significance: to provide by the year 2000 almost each Soviet family with a separate apartment or an individual house, as well as to fully satisfy the needs of the population in preschool institutions for children in the next few years. Realization of these plans requires maximum mobilization of efforts and means and constant attention for the above-mentioned vitally important problems both on the part of the ministries and the Trade Union Central Committee and on the part of local administrators and trade union organizations.



In the last few years, systematic work has been in progress on the improvement of living conditions of industrial workers. The Trade Union Central Committee participates in the development of annual plans for the distribution of funds for housing construction and social and cultural facilities, periodically hears reports of the directors of economic agencies and committees of the trade union on these problems, and influences faster completion of housing by addressing such matters to local party agencies and construction ministries.

Special attention is being given to creating good housing conditions and amenities for those living in the West Siberian oil and gas region, as well as in the regions of Western Kazakhstan and the Astrakhan gas complex. These problems were discussed twice at the plenums of the Trade Union Central Committee.

Services to nearly 120,000 workers living in dormitory facilities have improved. During the period under review, more than 300,000 families of workers in our industry improved their living conditions. Preschool institutions for 73,500 children and school for 83,800 children were built. The cost of these facilities was over 4.5 billion rubles. Modern residential buildings and social and cultural amenities are being built in cities and settlements of oil, gas and construction workers. The living space of dormitory facilities increased by more than one million square meters. Temporary barracks were completely eliminated.

However, the housing problem still remains to be most urgent. At the present time, more than 500,000 workers are in need of better housing conditions. On the average, only 60-65% of the needs in kindergartens and nurseries are satisfied. In this situation, the Minnefteprom did not fulfill the housing plan during the last five-year plan (by more than 700,000 square meters). The introduction of housing by Mingazprom and Minneftegazstroy was not progressing smoothly.

As was indicated by on-site inspection and complaints of workers received by the Trade Union Central Committee, many enterprises violate the principle of social justice in the registration and distribution of housing facilities. This indicates that trade union committees do not use their rights and authority sufficiently strongly in solving this most important problem, forgetting about their high responsibility. This work is particularly unsatisfactory in the Tyumen Oblast and Komi ASSR.

During the Twelfth Five-Year Plan, it is planned to build housing facilities for the workers of our industries with an area of 21.4 million square meters, and preschool children institution for 130,000 children. It is planned to eliminate completely old temporary housing facilities in the West Siberian region.

The Party instructed each industry, each region, kray and oblast to exceed the volumes of housing construction planned for the current five-year plan. It is the most important task for trade unions which has to be constant unabated control.

In connection with the general aim to improve living conditions of industrial workers, the Trade Union Central Committee jointly with the ministries are implementing measures for the realization of the Food Program. During the Eleventh Five-Year Plan, the network of subsidiary farms increased considerably. They produced 91,100 tons of meat, more than 220,000 tons of milk, about 528 million



eggs and other products. This tangible help in supplying food to the workers must be steadily increasing.

There are also definite positive tendencies in the development of public catering and trade. The seating capacity of dining rooms increased by 67,600 places. Many enterprises brought their network of snack bars and cafeterias to the norm and organized reservation and personal services centers.

However, the problem of providing public catering to the workers is not yet fully resolved. There is a shortage of dining cars. According to the Trade Unions Central Committee, cafeterias can satisfy only 84.9% of the needs in seating capacities. To this day, some enterprises, organizations and dormitories do not have dining facilities.

The immediate task of trade union committees is to press for a cardinal change in this situation: to ensure hot meals for all workers, improvement in their quality and introduction of advanced form of services. It is necessary to implement concrete measures before the end of 1987 for increasing the seating capacities in workers' cafeterias to the established standards at the majority of enterprises. During the current five-year plan, it is necessary to build cafeterias for total sitting capacity of 73,900 places (10,700 places for diatetic meals).

It is also necessary to give more attention to the development of the network of cultural and educational institutions because the results and the scales of educational work among the masses depend directly on this. The problems of improving communist education of the workers were discussed at the Fifth Plenum of the Trade Union Central Committee.

Trade-union organizations participated actively in the organization of cultural and educational work. During the period under review, the number of lectures increased by 17,800 and the number of listeners increased by 400,000. According to the results of a competition, 45 clubs and 30 professional libraries were awarded prizes. The experience in the reorganization of the work of such cultural institution as the Palace of Culture and Sports "Druzhba" of the PO "Orenburggazprom", DK [Palace of Culture] "Oktyabr" of the PO "Nizhnevartovskneftegaz", DK "Neftyanik" of the PO "Surgutneftegaz" and others deserves to be disseminated.

At the same time, the expected sharp change in the improvement of the organization of workers' leisure did not occur. Only 43% of the workers in our industries are systematically engaged in physical culture and sports, and there are extremely few simplest sports facilities built by enterprises.

Trade union organizations are called upon to reorganize their work on the ideological support for the acceleration of social and economic development of the industries.

Main attention of the Trade Union Central Committee in the area of labor safety regulations was concentrated on improving the prevention of industrial injuries. Jointly with the ministries, sectorial labor safety control systems were developed and implemented. During the Eleventh Five-Year Plan, more than 20,000

industrial facilities which did not meet safety requirements were rebuilt and overhauled in the industries. The availability of sanitary facilities was improved.

This work contributed greatly to the lowering of the level of industrial injuries in 1985 in comparison with 1982 (with respect to the frequency factor per 1000 workers) by 15% for the Trade Union Central Committee. The number of fatal accidents decreased by 4%.

However, on site studies indicate that some enterprises and organizations are too slow with the introduction of sectorial labor safety control systems and do not sufficiently train their personnel in safe methods of work.

A number of additional measures were implemented for improving the prevention of occupational traumatism. Letters were sent to enterprises and organizations where fatal injuries occurred last year demanding to reveal and eliminate their causes. The problems of motor vehicle accidents were examined in the organizations of the Minneftegazstroy and Minnefteprom. Schedules of complete inspections of enterprises and organizations of the industries for labor safety are being prepared jointly with the ministries and the USSR Gosgortekhnadzor [State Committee of the Council of Ministers for Supervision of Industrial Safety and for Mining Inspection]. In 1986, associations "Tomskneft", "Nizhnevolzhskneft", "Surgutneftegaz", "Azneft", and others were inspected. A number of organizational measures have been planned for further strengthening of the control and supervision of working conditions.

The work of the Trade Union Central Committee in the area of state social insurance was directed toward further improvement of disease prevention, provision of medical services and relaxation of workers and employees and the use of the funds of the social insurance budget.

More attention has been given to the development and strengthening of the material and technical base of medical and health-improvement institutions. Polyclinics for 16,005 patients, hospitals for 4601 beds, sanatoriums for 5151 people and 642 health centers were built.

In Western Siberia, a regional program "Vakhta" is being implemented. A resolution as passed with recommendations for the prevention of diseases, improvement of working and living conditions, the diet and medicosanitary services for those who work by the dispatched shift team method.

Sectorial complex programs "Zdorovye" [Health] were approved for 1986-1990. Industrial enterprises have 88 sanatoriums which treated 411,000 workers and members of their families during the five-year plan. At the same time, there are no sanatoriums of enterprises in Georgia, Tomsk, Omsk, Chelyabinsk and Astrakhan oblasts, Moscow and Kiev.

These problems have to be resolved and work in this respect must be activated everywhere.

For a more active utilization of the forms of moral stimulation of teams, trade union personnel and active members for successful resolution of social, industrial

and cultural problems, as well as for long and fruitful service, the Presidium of the Trade Union Central Committee approved a Statute of the Trade-Union Testimonial. During the period under review, more than 1600 active members were awarded the badges and testimonials of the VTsSPS [All-Union Central Trade-Union Council] and were cited by the Trade Union Central Committee.

Trade union organizations are conducting work on the exchange of documents, considering it to be an important sociopolitical measure contributing to the strengthening of responsibility and organization of trade union members. At the present time, this on-site work is nearing completion.

During the preceding period, we achieved a rise in the level of the organizational work of our trade union. The statements and the conclusion given in Comrade M. S. Gorbachev's speeches on the improvement of the style and method of work and personnel policy became the criteria for evaluating our own activities and a starting point in the practical reorganization of the work of all sections of the trade union, from trade union groups to the apparatus of the Central Committee. Today, the fighting spirit of trade union organizations and their basis, trade union groups, has become noticeably stronger. In the past few years, the number of trade union groups in teams increased by more than 18,600. Team councils are functioning in most of them. The role of councils of team leaders has increased.

The development of social principles has become an important direction in the work of our trade union. At the present time our trade union has about 900,000 active members.

At the same time, the Central Committee and trade union committees are not reorganizing their activities sufficiently energetically in accordance with the resolutions of the Twenty-Seventh CPSU Congress. Some trade union members still use old ideas and approach to the fulfillment of modern tasks. They are acting in the old way, do not always respond to the needs and requests of the workers in a businesslike and effective way, disregard the solution of social problems and forget about the human factor.

During the period under review we continued to improve the trade union structure, bringing it into line with the economic structure of industry control. After the second congress of the sectorial trade union, the Mary, Astrakhan, Kashkadarya oblast committees, Tyumenskiy, Oktyabrskiy, and Raduzhenskiy rayon committees of the trade union, as well as 659 primary organizations, including 22 trade union committees of production associations, 20 trade union committees of trusts were organized. At the present time, the trade union has 6881 primary organizations, 15,900 shop committees and about 63,900 trade union groups which unite about 2.32 million members of the trade union, or 99.6% of those working and being trained in the industries.

In other words, much work has been done in all directions of the trade union activities. However, there still are even more complicated and large-scale tasks connected with energetic reorganization of the activities of the Central Committee and trade union committees in accordance with the resolutions of the Twenty-seventh CPSU Congress.

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## INTERVIEWS WITH OIL, GAS, CONSTRUCTION MINISTRY HEADS

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[Report on interviews with V. A. Dinkov, minister of the petroleum industry, V. S. Chernomyrdin, minister of gas industry, and V. G. Chirskov, minister of construction of petroleum and gas industry enterprises, by the editorial office]

[Text] On the eve of the third congress of the sectorial trade union the editorial office of this journal requested V. A. Dinkov, minister of the petroleum industry, V. S. Chernomyrdin, minister of the gas industry, and V. G. Chirskov, minister of construction of petroleum and gas industry enterprises, to answer the following questions:

1. What is being done in the industry in connection with the social trend of the plans of the Twelfth Five-Year Plan?
2. What is actually being done to carry out the program for the acceleration of scientific and technological progress?
3. What are, in your opinion, the reserves for further improvement of the forms and methods of the organization of socialist competition?
4. What are your wishes to the third congress of the sectorial trade union?

V. A. Dinkov, minister of the petroleum industry:

1. Success of any matter is determined by people. In our time, when the role and the responsibility of each worker for the state of affairs at his work place have increased considerably and are becoming determining factors for the progress of society as a whole, the role of the human factor can hardly be overestimated. At the same time, developing initiative and increasing demands for working groups, it is necessary to solve social problems of the industry and be concerned about the welfare of the people systematically everywhere.

At the present time, enterprises and organizations of this industry have about 19 million square meters of housing and more than 1000 dormitory facilities. During the Eleventh Five-Year Plan, the available housing area for the oil industry workers will increase by 35%. Naturally, these figures will continue to grow steadily.



For the Twelfth Five-Year Plan, the Ministry of the Petroleum Industry planned an extensive social program. I shall mention only some of its main points: the volumes of housing construction will increase by 1.3 times. More than 40,000 oilmen of Western Siberia will change their temporary housing for permanent. The number of kindergartens will double. It is planned to build polyclinics for 12,800 outpatients per shift and hospitals for 7980 beds.

Jointly with the TsK [Central Committee] of the sectorial trade union, it was decided to expand considerably the network of sanatoriums, vacation centers, health improvement centers, sport facilities and structures. Subsidiary farms of the industry which contribute considerably to the solution of the Food Program will be developed further during the current five-year plan. Special attention will be given to the development of agricultural production in the Glavtyumenneftegaz, where the production of meat, milk and vegetables will be doubled.

An important task of economic and trade union agencies is to ensure the principle of social justice in distributing housing facilities, travel orders to sanatoriums and vacation facilities etc.

2. The main task of the Ministry of the Petroleum Industry in the Twelfth Five-Year Plan is to ensure a stable fulfillment of oil production plans by the enterprises and organizations of the industry through a considerable increase in labor productivity on the basis of the introduction of the achievements of the scientific and technological progress, effective and reliable equipment and technology and full automation of production. This involves first of all the development and introduction of efficient drilling and oil field equipment instruments and materials, automation and telemechanization means and systems, as well as a considerable expansion of their list and volumes of their deliveries. The Minnefteprom jointly with related ministries developed and approved 23 special-purpose integrated programs which provide for the development and introduction of about 300 types of new equipment and removal of outdated equipment from production. It is important to note that all of these programs are intended for achieving target indexes in the area of geological prospecting, construction of wells, development of fields, extraction of oil, capital construction and other important areas. Much attention is being given to problems of increasing oil recovery of the strata which will considerably contribute to the fulfillment of the oil production plans, particularly at the fields of Western Siberia, Kazakh SSR, Komi ASSR and Tatar ASSR. Successful fulfillment of the tasks set by the Twenty-Seventh Party Congress is possible only through close and fruitful cooperation of industry with sectorial science in which we are placing our great hopes. We are also counting on the help of academic and vuz science. Today, in the conditions of acceleration in all spheres of the nation economy of the country, any procrastination and hopes for some vague prospects harm our entire society. Creative searching, boldness in overcoming the difficulties and innovative approach to the solution of arising problems are the qualities necessary for each worker for solving the large-scale problems of the industry.

3. Today, all workers are preparing to celebrate the seventieth anniversary of the Great October Revolution and are making high socialist pledges in honor of this significant event.

In September 1986, the CPSU Central Committee approved the initiatives of V. M. Gvozdev's team from the mine "Raspadskaya" of the association "Yuzhkuzbassugol", A. P. Potapov's team from the mine "Vorgashorskaya" of the association "Vorkutugol" of the USSR Ministry of the Coal Industry and V. L. Sidoreyko's drilling team from the Surgut UBR [drilling department] No 2 of the association "Surgutneftegaz" which found wide support in each oil region. More than 1700 enterprises, shops and teams of leading professions decided to complete the tasks of two and more years of the Twelfth Five-Year Plan by 7 November 1987.

The activity of the working teams of the industry contributed greatly to the achievement of definite positive results. In September of this year, the industry reached the planned daily level of oil production.

We are, of course, pleased with this. However, we understand that not all of the reserves have yet been used and proper changes did not occur in the thinking of people, in raising the level of organizational and political work and in the development of creative initiative of the workers.

Not all teams are making stepped-up economically substantiated commitments and do not publicize them widely.

Formalism is practiced quite often in the organization of socialist competitions. Conditions of competitions and their indexes often do not orient the participants toward achieving high final results, increase in the effectiveness and quality of production and strengthening of discipline. It is necessary for the form of socialist competitions to correspond to the demands of the times. Having eliminated these faults, we shall make competitions more competitive and increase their influence on the improvement of technical and economic indexes in the industry.

An important role in this respect belongs to trade union committees which contribute considerably to the development of the fuel and energy complex of the country.

4. The third sectorial trade union congress is being held at a significant time, the time of radical reorganization in all spheres of the national economy of the country. I am confident that it will provide a new powerful impulse in the activities of trade union organizations of the petroleum industry for striving for higher goals. I would like to wish all delegates, and through them all working teams, new achievements for the welfare of our great country.

V. S. Chernomyrdin, minister of the gas industry:

1. Social problems are given an important role in the program for the development of gas industry. We proceed from the idea that production results depend greatly on creating comfortable living conditions and well-being of the workers. During the last five-year plan, the tasks for the completion of housing facilities and social and cultural amenities were fulfilled. The available housing facilities practically doubled, amounting to 8.4 million square meters. Eighty percent of the industry's workers have comfortable accommodations according to established standards.

However, we, of course, realize that the solution of social problems in our industry is not running well and without difficulties. In this respect we still have quite a few faults and unrealized possibilities. There still is a shortage of housing, particularly in the main gas producing region, Western Siberia, along the routes of the largest gas lines and in Astrakhan.

In accordance with the resolutions of the Twenty-Seventh CPSU Congress, the ministry planned to complete 6.2 million square meters of housing during the current five-year plan with social and cultural amenities. This is considerably more than during the last five-year plan. The extensive social program has been developed for the West Siberian gas complex, where it is planned to create all necessary conditions for a normal and happy life of the workers.

Considering the acuteness of the housing problem and having found additional reserves, the ministry jointly with the Trade Union Central Committee decided to bring the volume of housing construction in the Twelfth Five-Year Plan to 7.2-7.5 million square meters, and in the Thirteenth Five-Year Plan to 8.2 million square meters. Realization of these measures will make it possible to completely eliminate housing shortage and by 2000 to provide each family of gas industry workers with a separate apartment. It is also planned to satisfy all the needs in children's preschool institutions by 1990.

The trade and public catering network is expanding considerably. Subsidiary farms will be developed further.

2. The complicated and large-scale tasks set by the Twenty-Seventh Party Congress for the gas industry cannot be accomplished without its large-scale re-equipment.

The construction of surface field facilities at the Yamburg gas condensate field is a striking example of the successful realization of the achievements of the scientific and technological progress. Multiple drilling of slant holes in the conditions of highly icy permafrost soils was used there for the first time in the world.

The unit capacity of gas treatment units was increased to 27 billion cubic meters per year. They are built by advanced industrial methods with the use of technological equipment weighing from 300 to 600 tons on pontoon foundations, which makes it possible to perform the bulk of construction and installation jobs (up to 80%) at plants. This improves substantially the economic indexes of construction, reduces the length of construction and lowers labor input.

The reliable technical solutions and the high level of automation on the basis of microprocessor equipment with transition to remote control of technological facilities used for the Yamburg field project made it possible to switch to the shift team dispatch method of its operation.

In the construction of main gas lines with large-diameter pipes and the pressure of 75 atmospheres from the Yamburg field, a complex of measures of the scientific and technological progress are used to conserve fuel and energy resources and for further industrialization of the construction of compressor stations. Instead of individual gas pipelines, we are switching to the construction of

whole systems operating in a single technological mode. Their interaction with other facilities of the unified system of gas supply is taken into consideration.

Compressor stations are equipped with automated unified gas compressor units with a unit capacity of 16 and 25 mW. Automated systems for the control of technological processes of gas transportation are being introduced on all main gas pipelines.

A wide range of technical innovations is also used in developing such large fields as the Karachaganak, Astrakhan and Sovetabad fields, as well as in developing oil and gas deposits of the continental shelf.

A number of complex technical and organizational problems are to be solved during the current five-year plan. Preparatory work has already been started on the development of the gas, oil and condensate deposits of the Yamal Peninsula situated in extremely unfavorable geological and climatic conditions.

However, one of the first-priority tasks is to increase the degree of extraction of hydrocarbonic raw materials from the earth. A development technology with reservoir pressure maintenance by gas cycling into the stratum will be introduced at a number of gas-condensate fields, which will make it possible to increase condensate recovery to 60-70%.

The main place in the reequipment of the industry is given to the introduction of equipment with indexes corresponding to the world level. Jointly with the machine-building ministries, it is planned to develop and introduce gas turbine pumping units with an efficiency of up to 36%, steam-gas units with an efficiency of up to 40%, electric drive units with a capacity of 25 megawatts, field installations for low temperature condensation and absorption, high-pressure compressor units for injecting the gas into the stratum and many others.

Further technological progress in the gas industry will be the decisive factor of intensification with the aid of which the industry will be brought to a qualitatively new level.

3. There are many people in the gas industry to compete with and to follow their examples. They are our outstanding production workers, Heroes of Socialist Labor: driller of the Vuktyl gas field administration of the association "Severgazprom" V. P. Kosnyrev, senior operator of the association "Orenburggazzavod" A. G. Zibarev, repairer of technological units of the Urdoma LPU of the association "Ukhtatransgaz" A. I. Parilov, USSR State Prize winner, OPS-1 gas extraction operator of the association "Urengoygazdobycha" V. S. Sakharenkov and many others. They are characterized by their highly productive work, professional skill, constant creative searching and active civic position. They show on their example what it means to work in an accelerated pace.

Realizing that advanced experience is valuable when it is repeated, we are trying to disseminate it widely and effectively in the industry for it to become available to all workers.

Reorganization of socialist competitions has been started in the gas industry, stressing quality indexes of work. Conditions of competitions have been



reexamined, the number of reporting indexes has been reduced considerably, and only those were included which reflect their main goals: increase in labor productivity, improvement in the quality of product, conservation of all types of resources, fulfillment of contractual obligations, strengthening of labor discipline and solution of social problems. All of these measures have a favorable effect on the activation and results of socialist competitions. We are trying to make them truly competitive, giving full range for creative initiative of each worker.

4. First of all, I would like to wish the congress fruitful work, detailed discussion of the urgent problems of the socioeconomic development of the gas industry. The resolutions worked out by the trade union forum will, undoubtedly, be an important factor for an accelerated and effective development of the industry and successful realization of the goals set by the Twenty-Seventh Party Congress and the energy program of the USSR.

V. G. Chirskov, minister of construction of petroleum and gas industry enterprises:

1. In the conditions of the industry and construction of industrial centers, just as any plant in other regions, the pace and quality of work are determined by the equipment, technology and organization of work and management. The attitude of a person toward his work, and his physical and moral state can either speed up or slow down the programmed production. However, our teams work independently, thousands of kilometers away from the administrative headquarters and encounter very unusual geological, natural and climatic conditions of construction. Under these conditions, timely completion of the planned capacities for the extraction and transportation of fuel depends entirely on the creative ingenuity of the workers.

Considering the social trend in the plans of the Twelfth Five-Year Plan, the industry developed the scientific and technical program "Social Development of the Workers of Enterprises and Organizations of the Minneftegasstroy [Ministry of Construction of Petroleum and Gas Industry Enterprises] for 1986-1990 whose realization will contribute to the enhancement of the role of the human factor and intensification of the construction of petroleum and gas industry enterprises. It is assured by the complexity of the approved measures. First of all, it sets concrete goals which the industry must achieve in the improvement of the housing, cultural and living conditions of the workers. In order to fulfill the task set by the Twenty-Seventh CPSU Congress in providing each family with an individual apartment or a house by 2000, we must introduce additionally about 12 million square meters of housing facilities. To accomplish this, it is planned to build 5.8 million square meters of housing facilities in the Twelfth Five-Year Plan against 3.5 introduced during the last five-year plan. One year of work on the social program showed that the industry is capable to accomplishing this. About one million square meters of good quality housing facilities were completed. It is planned to build more than one million square meters of housing next year. The need in kindergartens will be satisfied in the industry by 1990.

For this purpose, it is necessary to increase the number of vacancies in pre-school institutions by 42,000. About 88,000 children can attend simultaneously our pioneer camps. In order to satisfy everyone who wishes to send their children

to summer camps, it is planned to increase their capacities by 11,000 vacancies. The capacities of sanatoriums and dispensaries will be increased to accommodate 2500 more people and the capacities of vacation hotels, part of which will be built on the shore of the Black Sea, will be increased by 4500 vacancies.

2. We have a systemic approach to the development of the scientific and technological progress. We have abandoned the practice of making uncoordinated improvements on which the plan for the introduction of new equipment was formerly based and worked out a mechanism for controlling the processes of the development and realization of innovations which coordinates the results of the reorganizations in the equipment, technology and the management mechanism with the indexes of the plan for the economic and social development of the industry. Special regulations were approved which define the basic principles of the development of the system for the control of the scientific and technological progress, improvement of planning, organization and monitoring the introduction and realization of scientific and technological achievements.

Of course, it is impossible for one industry to cover the entire range of studies and development. Therefore, the fundamental problems of the development of the construction of petroleum and gas industry enterprises will be solved within the limits of All-Union scientific and technical programs with participation of 19 academic institutes. The recent reorganization of the activities of scientific-research, planning and design organizations of the ministry made it possible to use the potential of sectorial science in satisfying concrete production needs. The conversion of NII [scientific research institutes] and KB [design bureaus] to the self-supporting system of the development and introduction of new equipment on the basis of job orders will, certainly speed up the development of advanced technologies for the development of the Yamburg fields and the construction of field facilities at the Yamal Peninsula, Western Kazakhstan and the Caspian depression.

3. Economic roots of such unhealthy phenomena in capital construction as delays and low quality of the structures were named at the Twenty-Seventh CPSU Congress. This was a result of the fact that the majority of workers of the construction conveyor were rewarded, just as before, not for the completed project but for the performance of intermediate operations which often had nothing to do with the project under construction. As is known, the responsibility for the final results is greater in teams where each worker is rewarded from a collective wage fund established for the delivery of planned production capacities, buildings or structures. For example, in our industry, the work of contracting teams is twice as productive as that of the ordinary teams and the quality of their work is higher. At the present time, they are doing more than one half of the entire volume of jobs.

The monetary and material expenditures in larger teams and flow-line sections, where the work of the engineer, accountant and economist is evaluated on the basis of the input into the final result on common grounds are estimated even more thoroughly. With respect to their size, they are close to sections or even small construction administrations. This is why the experience of work at the collective contract work of the trust "Mosobltselstroy" No 18 approved by the CPSU Central Committee is particularly valuable for us. It shows a path for radical reorganization of the economic mechanism of a construction complex and a switch

to a true self-supporting system and normative deadlines for the construction of projects and introduction of capacities.

At the present time, about 500 large section and flow-line teams which have favorable preconditions for further improvement of the forms and methods of the organization of socialist competitions are already operating in the petroleum and gas construction. The principles of management tested in the trust "Mosobl-sclstroy" No 18 at the section of I. V. Smirnov of the association "Sibkomplekt-montazh" and in the expanded complex team of the trust "Megiongazstroy" headed by Hero of Socialist Labor N. P. Nezhdanov are realized particularly successfully. The effectiveness of their work strengthens our confidence in the necessity of switching construction administrations and whole trusts to full cost accounting, self-repayment and self-financing. The sectorian complex program for the development of cost accounting to the year 1990 envisages to change up to 65% of construction workers working in teams to the collective contract system.

4. I wish fruitful work to the congress. I hope that under the conditions of economic independence which construction organizations are now achieving, the trade union will be participating more actively in the process of the democratization of management, personnel selection and arrangement and in the discussion and realization of the plans, particularly, the plans of social development of the workers. The opinions of the trade union organization must be heard in all of this. Therefore, I would like the congress to work out resolutions that would aim them at greater initiatives and creativeness, particularly in the problems pertaining to working and living conditions of the workers.

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## DRAFT GUIDELINES FOR WORKERS' EDUCATION PUBLISHED

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[CPSU Central Committee Draft: "Basic Directions for Restructuring the Political and Economic Education System of the Workers"]

[Text] Major transformations are taking place in the life of Soviet society, and positive tendencies are gathering strength. The process of the practical realization of the strategic course for accelerating socio-economic development, restructuring and qualitative transformation of all spheres of society, worked out by the April (1985) CPSU Central Committee Plenum and 27th Party Congress, is acquiring increasingly greater scope and depth.

Girding for the struggle to improve society, the party is proceeding from the position that it is necessary to lay a solid foundation of conviction for this vast project. Formulating the consciousness of millions of workers and transforming their psychology and thinking are among the key tasks for ideological activity. Close contact with social practice, depth of ideological-theoretical content, full and accurate accounting for the realities of domestic and international life and the growing spiritual needs of the workers, closeness with the people, uprightness, well-reasoned arguments and concreteness are the hallmarks of this struggle.

Ideological work must become truly active in all of its directions. In accordance with the requirements of the 27th Party Congress and the January (1987) CPSU Central Committee Plenum, the political and economic education system must be restructured; formalism and dogmatism must be eliminated in it; and it must take on a creative character. It must equip communists and workers with the ability to think and act with political maturity; it must arouse lively interest in theoretical knowledge and teach its use in practice; and it must promote the spread and affirmation of socialist ideals and the socialist way of life as the most advanced forms of organizing labor and production.

I. Marxist-Leninist Education in Conditions of Accelerating the Country's Socio-Economic Development

Marxist-Leninist education is an effective means for ideological tempering of the cadres, for political instruction and education, and for activation of the human factor. The entire experience of building socialism testifies to its importance in the revolutionary restructuring of society, in shaping



the individual, and in affirming communist ideology. It has become an integral part of the intellectual life of the Soviet people, and the most important form of contact between the party and the masses.

At the present time demand for training has grown significantly. The social achievements of our century are altering the conditions for further societal development. New economic, political, scientific-technical, domestic and international factors are commencing to operate. The level of the workers' education and the degree to which they are informed have risen. Socialist democracy is becoming deeper and popular self-rule is developing; openness and truthfulness are being increasingly affirmed; values are being reevaluated and creatively reinterpreted; and the quest for new methods of organizational and ideological work is expanding.

Tasks which are unprecedentedly complex by nature and historic in scope, and the intensification of the ideological confrontation between the two world systems give rise to the need for significant advances in formulating an integrated Marxist-Leninist philosophy, and for increasing the level of the political culture and the labor and social activeness of the Soviet people.

Political training and economic education must be examined by party organizations individually and in close interaction, and must complement and enrich one another. Political training promotes in-depth understanding of the acceleration of socio-economic development and the need for improving socialist productive relationships, while economic education promotes the mastery of ways and means for increasing the maturity of Soviet society, and for developing democracy and popular self-rule.

At the present critical stage in societal development, political and economic education is called upon to:

become an effective lever for revolutionary renewal and acceleration of the country's socio-economic development, and to help the party carry out the restructuring of all aspects of the life of society;

promote a situation in which the workers, on the basis of profound mastery of Marxist-Leninist teaching, consciously take part in working out the party policy and through their creative and conscientious labor make a personal contribution to its realization;

ensure that every person understands the urgency of the times in which we live, formulate new political and economic thinking, and redefine the psychology of the cadres in the spirit of the innovative approaches of the 27th Congress and the resolutions of the January (1987) CPSU Central Committee Plenum; and,

develop the ability to evaluate social phenomena from clear-cut class and internationalist positions, to defend the ideals and spiritual values of socialism, the principles and strategy of the international policy of the CPSU, and the historical rightness of our cause.

The existing training system cannot solve these problems. It is divorced from life, cumbersome and overly regulated. Theoretical training is very seldom tied in with practical training, and with the ideological-political experience of the masses. Most propagandists and members of the audience do not turn to the party documents or to the works of the founders of Marxism-Leninism. Abstract educational and cultural activities and scholasticism are hindering a true increase in knowledge. The lack of creative discussions and frank exchanges of opinions have significantly reduced interest in studies and have undermined their authority.

In recent years party leadership of this most important sector of ideological work has been extremely lax. Many party committees, raykoms, gorkoms, obkoms and kraykoms, as well as the central committees of the union republic communist parties, and their secretaries, take a superficial attitude toward Marxist-Leninist education of the workers, and have shifted this work to the houses and offices of political education and culture. First secretaries have not visited the classes for years, and do not take an interest in political and theoretical training, nor in the ideological and moral tempering of the cadres. Personal requests to communists for raising the theoretical level in the light of the requirements of the CPSU Regulations have been disparaged. Many of the leaders of ministries and departments, enterprises and institutions have withdrawn from organizing the workers' economic education. And party secretaries and branch offices of party committees are standing aloof from this work.

The strategy for acceleration and the new ideological-moral atmosphere in the country are creating exceptionally favorable social conditions for restructuring the system of political and economic training, and for significantly increasing its quality and its success rate.

The essence of the restructuring lies in totally renewing the content, in raising the ideological-theoretical level, in broad introduction of modern training methods, and in strengthening its ties with life. In-depth study of the resolutions of the 27th CPSU Congress and the key questions of the innovative policy of the party is being organized for all forms of training. Mastery of Marxist-Leninist theory must be aimed toward understanding the present stage of development of society--the stage of revolutionary and all-round transformations, and the actual practice of the struggle of the CPSU and the Soviet people to implement its programmed goals and tasks. The ideas of the Congress, profoundly grasped by communists and by all the workers, having possessed their minds and having been made manifest in specific deeds, will determine the course of our development, and will support the country's movement toward qualitatively new frontiers.

In accordance with the new requirements, the logic of the studies is changing as well. The actual conditions of life must be examined in the classroom in all its specific variations, in its multifaceted nature, with all its contradictions and constant movement. Steadfastly rejecting monotonous emphasis on the past and abstract theorizing, we must provide for the study of theory in close harmony with practical experience. "The point of view of life and practical experience," stressed Lenin, "must be the primary and the basic point of view of the theory of knowledge" (Vol 18, p 145).

Decisively strengthen the practical outcome of the studies. The students must be taught to work in a new manner, to manage intelligently and to give directions skilfully; they must develop the conception that their own work is a part of the business of the entire state.

Rebuild the organizational structure of political and economic training. Eliminate the multitudinous forms, and rationally use those which provide the most effective study of the theory and policy and the current instructions of the CPSU.

Give fullest consideration to the spiritual needs of communists, komsomol members and non-party persons, and organize a firm interest in self-education. Strive to achieve an intellectual need in every person for constant referral to party documents and to primary sources, and to expand their ideological-political, scientific-technical and economic outlook.

Change the style and methods of administration of the workers' political and economic studies. Provide for optimal combination of the principle of centralization with the expansion of independence by party organizations and the increase of their responsibility for quality and for the results of their studies. Strengthen the coordination and interaction of party, economic, trade union and komsomol organs in this sector of work.

While carrying out the restructuring, it is necessary to constantly rely on Leninist principles of propaganda and the great traditions of Bolshevism. Adherence to party principles and to science, and close contact with life are the unshakeable bases for the effectiveness of political and economic education.

## II. Political Education--At the Level of the New Requirements

The scope and the novelty of the transformations taking place place exceptionally high demands on political (party and komsomol) education. It must become a flexible, mobile, and dynamically-developing system, capable of the fullest and most effective response to the tasks put forth by the party, and to urgent practical needs.

The basic goal of party education is the formation of high idealism and consciousness among communists and to develop within each of them the qualities of a political in-fighter and mass organizer, a person who actively puts the general party line into practice, who is prepared to subordinate his personal interests to those of society and serve the people selflessly.

The ideological-theoretical and political training of communists is a vital factor in the strengthening and self-improvement of the CPSU; in strengthening the solidarity of its ranks; in increasing the fighting efficiency and advance-guard role of the party organizations, and the initiative and responsibility of the cadres; and in firmly establishing the pure and honest character of party members.

The substance of party education is comprised of urgent problems of theory and policy presented by the 27th Congress and represents a new stage in the development of Marxism-Leninism, the scientific basis for the party's strategic course and practical activity. Members of the CPSU, while studying the real processes taking place in the country and in the world, must rely on the theoretical heritage of Marx, Engels and Lenin. In contemporary conditions, when the party is striving to restore to the fullest the spirit of Leninism and to affirm Leninist requirements on the cadres, everyone must make an in-depth study of Lenin's works and turn to his thoughts and ideas.

Communists and Komsomol members must cultivate a need for systematic study of the current documents of the party and the government and imbibe sociopolitical information, extracting it from newspapers and magazines, radio and TV; they must develop a thirst for literature and art; and, they must learn to evaluate the phenomena of social and intellectual life.

For the forthcoming period the following academic courses are recommended:

Accelerating the Country's Socio-Economic Development--the Strategic Line of the CPSU;

The Theory and Practice of Developing Socialism;

The Soviet Economy: The New Quality of Growth;

Restructuring the System of Administration and Methods of Management;

The Human Factor in the Process of Socialism: Its Essence and Problems;

The Active, Integrated Social Policy of the CPSU;

The Revolutionary Renewal of Soviet Society and Social Justice;

CPSU Cadre Policy Under Conditions of Restructuring;

The All-Round Expansion of Socialist Democracy, Intensification of Popular Self-Government, and Strengthening the Legal Foundation of Soviet Society;

Urgent Problems of Development of National Relations; International and Patriotic Education;

The 27th CPSU Congress on Cultural Policy;

Problems of Shaping the Workers' Scientific-Materialist and Atheist World View;

The Ideological Struggle in the Contemporary World;

The Contemporary Stage of Development of World Socialism and Cooperation among Socialist Countries; and,

The Foreign Policy Strategy of the CPSU and New Political Thought in the Atomic Age.



The organizational structure for party training is comprised of universities of Marxism-Leninism, political seminars and political schools, and self-education in accordance with individual plans.

The role of universities of Marxism-Leninism is increasing. Training and retraining of propagandists are carried out there for the political and economic educational system, and they are raising the ideological-theoretical level of the workers entering the nomenklatura and the reserve of the party committees.

Seminars are being extensively developed as the basic form of training for various categories of communists and the non-party aktiv. Studies at these seminars must be structured in consideration of the specific nature of the production and social activities of the participants--engineering and technical workers, teachers, physicians, figures in the arts and sciences, and the party-managerial and ideological aktiv. Increase the prestige of political seminars among the artistic intelligentsiya, and their role in developing among them ideological stability, clear-cut philosophical positions, and class approaches to the phenomena of social life.

Political schools are to provide a qualitatively new form of education to their students through in-depth study of contemporary party policy, and provide them the skills for analysis of economic and social life in the working collectives. They are being set up for communists and non-party activists who as a rule have a secondary or incomplete secondary education.

The practice of political study through individual plans is being developed, and a system of genuine control over their completion is being introduced. For this purpose, party committees are organizing an extensive network of consultation points and permanently operating lecture agencies at the facilities of offices and houses of political education; consultations, thematic lecture cycles, and interviews are being conducted systematically.

Training of Komsomol members and young people is being carried out at Komsomol political schools and seminars and in political discussion clubs--popular forms for attracting young men and women to acquaint them with problems of the party's domestic and foreign policy and urgent questions of science, culture and art. The training at these schools and seminars must be of a creative and questing nature; it must be interesting and familiar to the young people, and closely connected with their spiritual needs; it must support their aspirations to display their capabilities in labor and in other forms of social life; and it must promote the formation of an active civic position.

Forms of mass propaganda--people's universities, lecture agencies, conferences, political book clubs and so on--should also be widely utilized for the purposes of more and more fully satisfying the increasing spiritual needs of communists, Komsomol members, and all workers, and to develop in them a solid interest in socio-political studies.

Democratic principles for organization of studies are receiving further development. The new system offers to communists and Komsomol members broad opportunities for reinforcing their political, economic, social, legal and other knowledge. The mandatory nature of the training is combined with voluntary choice of the forms and the recommended courses. The rational structure of Marxist-Leninist education, the number and the procedure for filling schools and seminars, and the makeup of the students in them are determined by the party organizations in consideration of the availability of skilled propagandists, the state of the academic-material base, the nature of the production and social work of the workers, the level of their education, and their political, economic and professional training. When the need arises, political schools and seminars should be set up where all members of a brigade, section or farm can study together.

The forms, methods and periods of training for communists and non-party members working in newly-opened regions, in remote sectors, in the oil fields, in geological survey parties, in the pasturing of livestock, and in production collectives with seasonal work or work of a mobile nature, are to be determined by the appropriate party organizations.

Political schools and seminars operate, as a rule, from 1 October through 1 June in the city, and from 1 November through 15 April in the rural areas. The academic year at universities of Marxism-Leninism and their branches runs from 1 September through 1 June. Study Days are being established by local party committees.

### III. Economic Training--A Most Important, Integral Part of Political Education for Increasing Skills and Retraining the Cadres

Restructuring the national economy on the basis of scientific-technical progress, transition to modern managerial methods and the spread of progressive forms of labor organization, require new approaches to raising the cadres' skills, and to shaping their economic thinking. Millions of workers must be retained in accordance with the growing level of production and the restructuring of the economy; workers must be trained who possess in combination a high degree of professionalism, political maturity, and economic erudition.

Based on practical needs, mass economic training should be combined with vocational training, and should be made a part of the state system for increasing the skills and retraining of cadres. It must become a most important link in the unified system of continuing education which is being organized in the country. Only in this manner can the competence of the workers be maintained today at the level of contemporary requirements, and only thus can specific knowledge be continually replenished and improved in the spheres of economics, science and technology; in management and organization of labor; and in solving social problems.

Increasing the skills and periodically retraining workers and engineering cadres at academic-course combines, vocational-technical schools, and at departments in institutes and other specialized academic institutions--must be organically supplemented by systematic training of the workers in various continually-operating forms of uninterrupted production and economic training right at the enterprises, associations, institutions and organizations.

The basic forms of such training will be comprised of schools for socialist management--created in place of schools for communist labor, and organized on the facilities of the collectives of brigades, shops, and farms, or from workers of the same profession; along with the workers and kolkhoz members, these schools will also be open to the brigade leaders, foremen and specialists who are members of the primary self-supporting labor collectives or those who support their work--and, production and economic seminars and universities of technical-economic studies, organized for engineering-technical and scientific workers, specialists, and economic administrators.

It is expedient to make extensive use of the effective forms of mass production propaganda which have been proven in practice: groups and circles for promoting quality, scientific-technical societies and clubs, voluntary economic and design laboratories, film lecture agencies, and so on.

Production and economic training will be conducted in accordance with comprehensive academic programs which support the cadres in assimilating urgent problems of economic theory and party policy, contemporary achievements of the science of control, new methods of management in conditions of intensification, practical mastery of the cost-accounting levers for increasing production effectiveness, skills for analysis of fulfilling plans for economic and social development, solution of specific economic tasks, and use of the best native and foreign experience.

Economic training should be carried out on the basis of differentiated standard academic programs, modified in the localities in consideration of the specific features of the enterprises and the peculiarities of the composition of the student body.

For the coming years the following courses on economics are recommended:

Intensification of Production and Labor Productivity;

The New Restructuring of the National Economy on the Basis of Scientific-Technical Progress;

The New Mechanism for Management and Control of the Economy;

Fundamental Improvement of Production Quality--An Important Factor for Acceleration;

Conservation of Resources--An Effective Management Method;

Complete Cost Accounting, Paying-As-You-Go, and Self-Financing;

The State Enterprise: Independence, Responsibility, and Self-Management, and;

The New Mechanism for Foreign Economic Activities and International Cooperation.

Ministries and departments, economic administrators, the AUCCTU, and trade union organs have been placed in charge of all work on planning and organizing economic-production training and on increasing its quality success rate; work is to be carried out under the supervision of the party committees. Looking upon this training as an integral part of the plans for socio-economic development of the working collectives, they must establish the necessary conditions for studies everywhere, utilizing for these purposes the funds allocated for training and increasing the skills of the cadres and for conducting mass cultural work, as well as the self-supporting funds of enterprises and organizations. Proceeding from the tasks for developing the branches and the peculiarities of the functions of the working collectives, the most rational structure and time for training will be determined, as will the composition and number of participants, the overall duration of the training, the methods for summing up its results, and the evaluation of the professional and economic knowledge of the workers.

Ministries and departments and the administrators of enterprises, institutions and organizations are to establish unified sub-units for economic-production training, and are to bring them up to strength with skilled specialists. Cadres are to be given increased responsibility for the uninterrupted improvement of economic training, ensuring that improvement of skill categories and classifications, certification, and transference of workers' duties and wages, are closely associated with the quality of their knowledge and the activeness of their practical application. The AUCCTU and USSR State Committee on Labor and Social Problems (Goskumtrud) are to introduce the necessary changes to the wage-rate and skill handbooks and other documents which regulate the solution of these problems.

Soviet Buros are charged with coordinating the activities of the ministries and departments, while the USSR ministries are charged with social development. Control over this work is to be implemented by the economic and branch departments of the CPSU Central Committee and the party committees.

#### IV. Improving the Quality of Academic and Scientific-Methodological Work

The new composition, organization and structure of Marxist-Leninist education presupposes restructuring academic and scientific-methodological work. A problem-oriented approach, dialog, contrasting various points of view, discussion and other active forms of collective discussion should be made the basis of the academic process. Seminar leaders and school officials must devote increased attention to individual work with the students. Research and in-depth independent study of documents, textbooks and academic literature, review of current events and phenomena of everyday practice--all of these should lie at the basis of the preparation and conduct of classes.

Analysis of specific situations, practical assignments, gaining of business matters, practical seminars, class trips, conferences, collective search for reserves, and defence of socialist obligations, must be made the norm. A system for accounting, analysis and introduction of student suggestions must be worked out in all working collectives. These must be examined within strictly-defined periods, along with the comments and proposals of the workers expressed at party and worker meetings and in the press.



The Propaganda Department and Economics Department of the CPSU Central Committee and the VDPP [All-Union House of Political Education] are to select party organizations to conduct experiments and further develop methodologies for political and economic training. The results achieved are to be systematically examined, and progressive experience is to be widely disseminated.

The Propaganda Department and the Economics Department of the CPSU Central Committee together with the All-Union House of Political Education, the Academy of Social Sciences at the CPSU Central Committee, and the Academy of the National Economy are to re-shape the academic plans and programs and commission the preparation of textbooks and methodological training aids for the new courses, to be published for the 1988/89 academic year. They must be distinguished by their high ideological and theoretical level, explanations appropriate to the new logic of the studies, topicality and concreteness, connection of theory and practice, well-reasoned arguments and readability, and by their graphic and popular language.

Leading scholars, specialists, highly-skilled methodologists, practical workers, and the best propagandists must be enlisted to develop the programs and the academic literature. Periodic contests are to be held to create textbooks on the most urgent problems of the theory and policy of the CPSU, and broad publicity must be given to this work.

Preparation and publication of literature, audio-visual materials, and graphic arts are to be made on the basis of future planning. Timely changes and supplements must be published for the textbooks and training aids in consideration of new party documents. Extensive discussion of published academic literature must be the practice. The rule must be--to introduce courses only when programs for them have been worked out and the textbooks have been published. For the basic courses it is expedient to publish sets of training aids, which include additional reading materials, exercise and problem books, sets of placards, photographic slides, and slide films.

Expanded preparation is to be made of the collected works of the founding fathers of Marxism-Leninism and CPSU documents on questions of economic and cultural construction, on administering a socialist society, on foreign policy and the party's foreign economic activities and on educating the masses. Publishing of literature on the methodology of Marxist-Leninist education and the psychological-pedagogical basis of propaganda is to be increased. And a bibliography of the country's best propagandists is to be established.

The administration, planning and organization of all work on preparation of standard programs, textbooks and training aids, graphic printed materials, audio-visual media, general methodological developments and recommendations for a political and economic training system, are vested in the Propaganda Department and Economics Department of the CPSU Central Committee and the VDPP. The Academy of Social Sciences, the Social Sciences Institute, and the Institute of Marxism-Leninism at the CPSU Central Committee are to be the leading centers for preparation of textbooks, training aids and programs. It is also expedient to enlist the higher party schools and institutes of the USSR Academy of Sciences, the Academy of Pedagogical Sciences [APS], and the Higher Komsomol School [VKS] at the Komsomol Central Committee for this work.

Political education houses and offices of the party committees are developing methodological aids, reference works and informational materials primarily of a local nature, and are summarizing and disseminating the experiences of outstanding propagandists.

Training and methodological support to the system of production and economic education is the responsibility of the Academy on the National Economy at the USSR Council of Ministers, Minvuz [Ministry of Higher and Secondary Specialized Education], Gosprofobr [State Committee for Vocational and Technical Training], branch ministries and departments, and the AUCCTU.

USSR Goskomizdat [State Committee for Publishing Houses, Printing Plants, and the Book Trade], Politizdat [Order of Labor Red Banner Publishing House for Political Literature at the CPSU Central Committee]; the presses of PRAVDA, PLAKAT, MOLODAYA GVARDIYA, MYSL, EKONOMIKA and NAUKA; Profizdat [Trade Union Publishing House, AUCCTU], Agropromizdat [State Agro-Industrial Commission Publishing House] and branch publishing houses; USSR Goskino [State Committee for Cinematography]; the nationwide firm Melodiya; and Diafilm Studios are to exhibit increased drive, energy and quality in publishing textbooks and methodological-training literature, graphic art, and audio-visual materials. They are to produce a series of documentary and training films on the experiences of outstanding propagandists.

The mass information media are summoned to make a significant contribution in scientific-methodological support for training. The magazines KOMMUNIST, PARTIYNAYA ZHIZN; the newspapers PRAVDA, SOVETSKAYA ROSSIYA, EKONOMICHESKAYA GAZETA, SOTSIALISTICHESKAYA INDUSTRIYA, STROITELNAYA GAZETA, SELSKAYA ZHIZN, SOVETSKAYA KULTURA, UCHITELSKAYA GAZETA, as well as other central socio-political, branch and scientific publications and local press organs, are to regularly provide space on their pages for such materials; and radio and TV stations are to organize the broadcasting of programs intended for propagandists and their audiences. For this purpose nationwide television lecture programs are to be prepared on the urgent problems of CPSU theory and policy being studied in the system of political and economic training.

To ensure that instructors, propagandists and the party aktiv are more fully informed, plans are to be made to increase the circulation of issues of ARGUMENTY I FAKTY, GLOBUS and NTR: PROBLEMY I RESHENIYA [The Scientific-Technical Revolution: Problems and Solutions].

The work of the magazine POLITICHESKOYE SAMOOBRAZOVANIYE [Political Self-Education] must be significantly restructured: it must be commissioned to publish methodological materials for the political and economic training system. It is important that the editors focus attention on rendering effective assistance to party organizations, propagandists and their audience; on raising the ideological-theoretical and methodological level of the studies; on introducing modern approaches to the organization of education; and on systematically highlighting progressive work experience. Eighteen issues are to be published annually, rather than 12; and it is to be renamed POLITICHESKOYE OBRAZOVANIYE [Political Education].

The Academy of Social Sciences and the Institute of Marxism-Leninism at the CPSU Central Committee, higher party schools, the Sociological Research Institute of the USSR Academy of Sciences, the Higher School of the Trade Union Movement, and the Higher Komsomol School must carry out research aimed at increasing the effectiveness of political and economic training. Special attention must be devoted to developing a scientific basis for methodology and questions of psychology, pedagogy and sociology with respect to propagandist activity. Research results must be energetically introduced to the practical work of the schools and seminars.

#### V. Strengthening the Material-Technical Base for Training

The new tasks for political and economic training require significantly strengthening its material-technical base. This work must become an organic part of carrying out the instructions of the 27th CPSU Congress for furnishing the latest means of information science and electronics to the ideological organizations, and to set up a modern technical base for ideology, science and culture.

Measures are to be implemented for fundamentally improving the production of technical means for propaganda and training and for increasing their quality and reliability; for organizing the materials in an orderly manner; and for developing and producing new devices and equipment. During the present five-year plan, production of video cassettes and transparencies for political and economic training is to commence. Production of video training programs is to be organized at the facilities of the Videofilm All-Union Creative Production Association. The periods for production and distribution of graphic training aids, methodological training films, slides, film strips, and phonograph records are to be reduced.

The Propaganda Department and the Administration of Affairs Department of the CPSU Central Committee are to work out a comprehensive program for equipping political education houses and offices of the party committees with modern technical resources. They are to be supplied with the necessary reproduction equipment, video-projection and TV-display equipment, photographic laboratories and materials; and measures are to be taken to computerize their operations. Scientific standards are to be worked out for equipping the academic auditoria and study rooms. Central supply of equipment is to be organized for party libraries, and their stocks of books are to be brought up to the authorized level. Special attention is to be devoted to political education study rooms at rural party raykoms. And the material-technical base of the All-Union House of Political Education at the CPSU Central Committee is to be strengthened.

The process of planning, construction or remodeling of buildings for city and rayon party committees and political education houses must envisage completely outfitting them with technical training resources. Ministries and departments are to support establishment of the material-technical base for training their cadres. Each working collective must have classrooms for training, and well-equipped auditoria and study rooms. The best accommodations are to be offered for conducting classes: general-educational schools,

palaces and houses of culture, clubs and libraries are to be used. A section on "The Material-Technical Base for Ideological-Educational Work," which includes creating and furnishing methodological offices, and training and lecture halls, must become part of the plans for buildings intended for public use.

Measures are to be taken to improve trade in technical propaganda means and display materials for lectures. By 1988 special stores must be set up in republic, kray and oblast centers to sell political and economic literature, methodological aids, film strips, slides and phonograph records. Base stores are to be designated in cities and major rayon centers for sale of technical means and for providing consultation services to purchasers. Distribution points are to be opened for equipment and technical training resources, and centralized repair is to be organized.

Beginning in 1988, subscriptions must be established for audio and visual aids for political and economic training, and their timely delivery ensured. There must be an expanded list of goods authorized for sale to party, trade union and Komsomol committees, enterprises and organizations, and kolkhoses and sovkhozes; market funds are to be used, on a voucher basis.

Planning and the system of indicators for production of technical training means are to be improved in the five-year and annual plans for economic and social development. An inter-branch center for technical means for propaganda and training is to be organized at the USSR State Committee on Science and Technology to coordinate the activities of the ministries and departments in developing and producing the technical means and audio-visual aids, to approve new models of equipment and information media, and to ensure close cooperation with the CEMA nations in this area.

## VI. Improving Party Supervision of Political and Economic Training

Cardinal improvement of party supervision is a crucial question in restructuring the workers' political and economic training. The sense of restructuring is that every party organization--from the republic to the primary level--must become innovative and creative, search for new ideas, and actively strive to put the instructions of the 27th Congress and the January (1987) CPSU Central Committee Plenum into effect. A firm line must be maintained to renew the contents, forms and methods of Marxist-Leninist education, diligently striving to make it relevant to genuinely practical matters and to the processes taking place in society today. We must strive to ensure that the concepts of acceleration and restructuring are firmly embedded in the minds of the communists and all the workers, so that they become the cause and the purpose of their lives.

The attitude toward political studies as an exclusively party matter must be decisively changed. Increased responsibilities must be placed on the central committees of union republic communist parties, and on party kray-koms, obkoms, gorkoms and raykoms and above all on their corporate organs--the plenums and the buros--for working out well-thought-out resolutions and putting them into practice, and for implementing direct supervision over Marxist-Leninist education.



First secretaries bear personal responsibility for the theoretical training and ideological-moral tempering of the cadres. It must become the norm for secretaries, department heads and other officials of party committees to personally speak at the classes, take part in the discussions and respond to questions from the audience.

Branch departments of party committees are assuming an increasing role in supervising the economic education of the workers. They must not permit substitutions, must maintain constant direction and control over the activities of economic and trade-union organs, and must render them proper assistance.

Primary party organizations must become the basic link in the work on improving the effectiveness and quality of political and economic training. The central focus of their activity must be shifted to personal work with the trainees, organization of practical implementation of adopted resolutions, supporting the initiatives of the propagandists, and encouraging creative pursuits. They must increase demandingness, implement effective control over the studies, listen to reports from CPSU members on increasing the ideological-theoretical level, and regularly hold interviews. A real turning point in political and economic training can take place only if every communist creatively masters the theory and policy of the party, which firmly and undeviatingly guides them in their activity.

Communist supervisors and officials of the party apparatus are called upon to set the example of in-depth study of Marxist-Leninist theory. They must be distinguished by their ideological stability, their high political standards, their competence, their ability to inspire people by personal example, their firm moral convictions, and by the constant need to associate with the masses, and to live for the interests and needs of the people.

Party organizations must devote increased attention to the ideological-political and moral tempering of young people; they must develop the young people's interest in political knowledge and increase the role and responsibility of Komsomol, trade union and economic administrators in this regard.

The central link of the party leadership for political and economic studies consists of work with the propaganda cadres. The corps of propagandists must be brought up to strength with people possessed of broad erudition and taste for theory and for association with the masses; people capable of thinking analytically and originally, who can defend communist ideals in a well-reasoned manner and wage an uncompromising struggle with alien ideology and morals; people who hold firm convictions on the vital necessity for the resolutions adopted at the 27th Party Congress, and on its policy for restructuring. Prestigious scholars and specialists; figures in literature and the arts; and party, soviet and economic officials should be actively recruited for this work. And the experience and knowledge of war and labor veterans should be more widely utilized.

A well-structured system for training and retraining propagandist cadres must be established everywhere. The capabilities of universities of Marxism-Leninism should be more fully utilized for this purpose. The quality of

Propagandists must receive better-quality training at the two-week courses given at houses of political education and skill-improvement institutes; and they must be permitted to keep their average monthly wages for this period. Training of propagandists without taking them away from their basic duties should be practiced widely; training should be held at permanently-operating seminars at the party raykoms and gorkoms, and at branch and regional courses conducted by economic and trade union organs. All possible support and assistance must be given to enterprises and associations which implement propagandist training through their own efforts.

Propagandists are to be kept informed in an effective and systematic manner. Meetings will be held with the leaders of local party, soviet and economic organs; with scholars and specialists; figures in literature and the arts; and with outstanding and innovative production workers. Topics at seminars will include analysis of the course of fulfillment of plans and obligations, and the work experience of the best labor collectives. And the propagandists must be regularly informed on measures taken for resolving vital problems.

The capabilities of the USSR State Committee on Science and Technology, scientific-technical information centers, and houses of science and technology must be more widely utilized in propaganda on new achievements and progressive production experience. Experience in establishing academic information centers at associations and enterprises must be disseminated.

Propagandists, who are carrying out a responsible party mission, must be afforded greater prestige. They must be provided favorable conditions for their creative work, and their moral and material incentives must be improved. Awarding of the title of "Distinguished Cultural Worker" to the best propagandists must be practiced more widely. Greater consideration must be given to their socio-political activity when awarding orders and medals. They should be granted leave as a rule during the non-academic season, and should be given tourist excursions on a privileged basis.

The first nationwide gathering of propagandists is to be held in 1985.

The functions of houses and offices of political education are to be reexamined: their main responsibility is to train propagandist cadres, furnishing them with methodological materials and a variety of information. In 1987 houses of political education are to be combined with Universities of Marxism-Leninism; they are to be transformed into modern academic-methodological centers, and are to be support bases for political work among the workers.

The quality of the work of Universities of Marxism-Leninism must be raised, and their structure revised: the Ideological Aktiv Department is to be reorganized as the Propagandist Cadres and Mass-Political Work Departments. The correspondence course training system for school and seminar leaders must be expanded. The selection of trainees must be improved, and strict control established over their studies and their subsequent utilization. Information on graduation from the University of Marxism-Leninism is to be entered in the record books of CPSU members. The administration and party committees at higher educational institutions, scientific institutions, and enterprises are to treat the work of the university instructors as responsible party assignments.

Precise coordination must be achieved in the activities of houses of political education, lecture groups (both permanent and temporary staff) from party committees and organizations of the Znaniye Society in working with propagandists and trainees.

The VDPP at the CPSU Central Committee must be given increased responsibility for academic and scientific-methodological support to political training; for the study, generalization and dissemination of the experiences of party propaganda and agitation; for putting to practical use the achievements of pedagogy, psychology and sociology; and for raising the skills of the cadres at houses of political education.

Party committees must improve their supervision of houses and offices of political education. Experienced workers must be assigned to them: graduates of the Social Sciences Academy at the CPSU Central Committee [SSA] and the Higher Political School, and VUZ instructors who hold advanced academic degrees and titles. A system must be introduced for retraining responsible officials at houses of political education and instructors at Universities of Marxism-Leninism, at the SSA, and at higher party schools.

Party committees must be given the right to bestow the title of docent or professor to workers at houses of political education who have academic degrees and who regularly conduct educational and methodological work at Universities of Marxism-Leninism. And the time spent working at houses and offices of political education must be counted as part of their scientific-pedagogical work experience. For these purposes, the appropriate amendments are to be made to the Statute on the Procedure for Awarding Academic Degrees and Award of Scholarly Titles.

The party's current strategic policy will bring about truly fundamental renewal of the system of political and economic education. Its restructuring will provide broad opportunities to party organizations and propagandist cadres for creativity and enterprise. Purposefulness and aggressiveness; close association with life; use of effective forms, means and methods; and clear-cut organization and a high rate of success must become the most important features of the new content of the training.

The CPSU Central Committee expresses its confidence that the restructuring of political and economic training will serve to mobilize the communists and all the Soviet people to successfully put into effect the resolutions of the 27th CPSU Congress.

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## MORE ELECTRONICS PLANNED FOR MOTOR VEHICLES

Moscow AVTOMOBILNAYA PROMYSHLENNOST in Russian No 12, Dec 86 pp 1-3

[Unattributed article: "Motor Vehicle Electronics in the 12th Five-Year Plan"]

[Text] As is known, the level of today's automobile building and the consumer qualities of the items being designed and built by it (especially such ones as fuel economy, ecological cleanliness, operating reliability, safety, suitability for technical maintenance and repairs, national economic effectiveness, and competitiveness) are greatly determined by the degree to which they are equipped with electronic systems and devices. That is why now -- when our country has entered upon the 12th Five-Year Plan that is rightfully called a five-year plan for the radical transformation of our society's production forces based on the general introduction of the achievements of scientific and technical progress -- the widespread use of electronics in automotive equipment is among the most important tasks that Ministry of Automotive Industry enterprises and organizations must solve during this period and in the more remote future-- and to solve it so as to move on this avenue, as on many others, to the forward frontiers of the world's automotive industry.

Undoubtedly, there are opportunities for this. As many branch specialists think, these are primarily contained in the already performed theoretical and material anticipatory work and in the experience that has been accumulated by the automobile builders, including the comparatively large amount of experience in developing and incorporating motor vehicle electronic items and large-scale and mass production. At the beginning of the Sixties, for example, the specialists in the Automotive Instrument Scientific Research Institute and the Moscow Automotive Tractor Electrical Equipment Plant imeni 60th Anniversary of October (ATZ-2) designed a contact transistor ignition system for gasoline engines which not only was not inferior to similar foreign models based on its reliability, adaptability to manufacture and operating characteristics but also exceeded them. The large-scale production of this system was arranged at that time (for the first time in the world). Here is a second example --two versions of an electronically controlled fuel injection system for gasoline engines (with central and dispersed injection) were also developed during the Sixties by specialists in GAZ [Gorkiy Motor Vehicle Works], TsNITA [Central Scientific Research and Design Institute for Fuel Equipment and Automotive Tractor and Stationary Engines], MAMI [Moscow



Automotive Institute], and the Moscow Carburetor Plant. Although their serial production was not organized for a number of reasons, the following fact testifies to the advanced nature of the technical ideas contained in them: The West German firm Boch built and began production of similar systems in 1967, i.e., considerably later.

It is possible to cite many examples of a similar type. All of them testify to the fact that the development of motor vehicle electronics began in our country -- based on a number of grounds -- earlier than in the developed capitalist countries. Subsequently, however, it slowed down somewhat: Although many new designs were suggested, the matter did not move any further than mock-up models in a number of cases. It was only after the Ministry of Automotive Industry developed a plan in 1976 for the complex use of automatic electronic equipment in motor vehicles, which became the legal basis for organizing such work, that the use of electronics was expanded further.

A great deal has been provided for in the branch plan -- primarily, the building and production of electronic devices designed to replace similar mechanical, hydraulic, pneumatic, and electrical devices in the traditional motor vehicle systems. First, this replacement permitted the reliability of the systems to be raised, their operating characteristics to be improved and their dimensions and material-intensiveness to be decreased; second, experience to be accumulated in building, producing and operating electronic items designed for operation under the specific conditions of motor vehicle equipment; and third, the appropriate contingent of specialists to be trained -- designers, product engineers, operating personnel, and repairmen.

A second avenue of measures, which was included in the 1976 plan, was the development of integrated systems, i.e. next generation motor vehicle electronics. It also provided for specific organizational, material, technical, and other measures.

By the end of the 10th Five-Year Plan, for example, the branch's enterprises had put more than 20 electronic devices and systems into production -- including integral voltage regulators of the 12 volt Ya112-type for ZIL [Moscow Motor Vehicle Works imeni Likhachev]-130 vehicles and PAZ [Pavlovo Bus Works] and KAVZ [Kurgan Bus Works] buses; of the 28 volt Ya120-type for MAZ [Minsk Motor Vehicle Works] vehicles, of the RR-133 and RR-390 types for motor vehicles with diesel engines, etc.) -- whose production exceeded 1.5 million items in 1980 and thanks to which tens of thousands of tons of ferrous and nonferrous metal, winding wiring and other materials were saved; electronic ignition systems that noticeably improved fuel economy and the ecological characteristics of motor transport systems; etc. During the years of the 10th and 11th five-year plans, contact-free ignition systems were introduced into production for practically all GAZ [Gorkiy Motor Vehicle Works] models; similar systems were designed for VAZ [Volga Motor Vehicle Works] and ZAZ [Zaporozhye Motor Vehicle Works] vehicles, Voskhod and MMVZ motorcycles, PAZ [Pavlovo Bus Works] buses, etc.; and control systems for the positive idle economizer were widely used on a number of motor vehicle engines.

Thus, the process stock in the area of motor vehicle electronics, with which the branch began the 12th Five-Year Plan, was rather considerable. However,

the opportunities for solving the tasks in the new five-year plan do not only consist of this. No less important is the fact that everything, which was hindering the development of new items for the branch, was revealed during the previous period, in particular, the lack of coordination that was caused by motor vehicle electronics being at the junction of sciences. Because of this, many motor vehicle specialists, including leading specialists, did not thoroughly know their potential capabilities and regarded them from their own point of view -- only as a method for improving individual automotive indicators (fuel economy, ecological safety, dynamics, etc.) and not as a way for shifting this equipment to a new qualitative condition. That is why their attitude toward electronics was the same as toward any other, long studied, traditional method for improving indicators: Only incorporate into production that which does not require a radical restructuring of production. On the other hand, the developers of electronic devices, especially component parts, did not picture to themselves sufficiently clearly the specific operating conditions of the electronics in an automobile. As a result of this, reliability and several other indicators of the items, which were designed by them, did not always correspond to those required.

Such departmentalization and the presence of certain shortcomings, including those concerning joint operations of different ministries, led to the measures, which had been outlined by the 1976 plan, being underfulfilled. Now, however, when a radical restructuring is taking place in the country in accordance with the decisions of the 27th Party Congress and the April 1985 and subsequent CPSU Central Committee plenums, the situation is changing in the field of using electronics in motor vehicle equipment. Evidence of this is the content of the branch plan in the 12th Five-Year Plan, the steps which have been taken to insure its fulfillment and work results during 1986.

The new five-year plan provides that the production of motor vehicles, which will correspond to the highest international level at that time, will reach 80-90 percent; and for newly developed ones -- 100 percent. A significant portion of them (up to 30 percent) are being equipped with electronic and microprocessor control systems, including ones like integrated control systems for gasoline engines; control systems for diesel engines; integrated engine protection systems; transmission and brake control systems; and information and diagnostics systems.

As examples of specific items that have already been introduced during 1986, are being introduced now, or will be introduced during the subsequent years of the 12th Five-Year Plan, one can cite the microprocessor systems for controlling the ignition and the positive idle economizer, which have been designed for AZLK [Moscow Motor Vehicle Works imeni Lenin Komsozol] - 2140, AZLK-2141, VAZ-21083, ZAZ-968M, ZAZ-1102, and GAZ-21-10 (production in this and next year) passenger car engines; the same system for ZIL-4314 truck engines; an adapted one, i.e., a self-tuning control system that operates on a flexible program, for those same devices that will be used in future VAZ passenger car engines and an integrated system with a combustion gauge, which is designed to control the injection of fuel and its ignition for GAZ-24-10 and RAF [type of bus]-22038 vehicle engines; a high-pressure fuel pump control system for diesel engines in KamAZ [Kama Motor Vehicle Works] and MAZ motor vehicles; route computers using vacuum-luminiscent displays with an

information read-out of six movement parameters and the technical condition of the motor vehicle; etc. The program also provides for a significant amount of microprocessor systems, whose design will be raised to the level of test models (for example, an electronic system for automatically controlling the transmissions of KamAZ and MAZ motor vehicles and LiAZ [Likino Bus Works] buses).

These are several avenues in the design work that has been planned by the branch during the 12th Five-Year Plan. Their main distinctive feature is the equaling not of the present level of work by the most prestigious foreign firms -- as often happened before and which led to a certain lagging behind (during the production and operating mastery of the new item, the level of its foreign analog rose) -- but of the scientifically forecast development of the design so that our native items would not be inferior but would exceed the foreign items from the moment they are produced.

As we see, the tasks are indeed not simple ones. The appropriate conditions are required to solve them -- the availability of a well trained cadre that thinks creatively; the presence of a good material base; the accurate organization of scientific, research, testing, and design works; and, finally, production and operation. These conditions have either already been created or are being created -- primarily through a different type of organizational measures.

The leading organization, which has complete responsibility for carrying out scientific and technical policy and the designing of motor vehicle electronics (including the design, development and production mastery stages of both the electronic systems themselves and their component parts) and of their technical diagnostic systems, has been determined in the branch. This organization is the Avtoelektronika Scientific Production Association, which includes the NIIavtotriborov [Motor Vehicle Instrument Scientific Research Institute], the October Plant for the Manufacturing of Special Production Equipment and the Riga Special Design Bureau for Technical Diagnostics. The tasks of the NPO [Scientific Production Association] is research in the area of motor vehicle electronics; the development of its main elements (hybrid and special integrated circuits, micro-assemblies, and devices and systems adapted for work on motor vehicle equipment); the output of not only test but also large industrial batches of these items; and the development of the technologies and equipment required for their manufacturing.

NAMI [Motor Vehicle and Engine Scientific Research Institute] and enterprises under the Main Administration for the Production of Automotive Tractor Electrical Equipment and Instruments of the Ministry of Automotive Industry (the Vladimir Avtopribor [Automotive Instrument] Plant, the Moscow Ate-2 Plant, etc.) have already begun working in close cooperation with the Avtoelektronika NPO. All of them are solving problems in the development and establishment of a branch base for developing, defining and producing motor vehicle electronics (they have re-oriented part of their specialists to the new tasks, filled their collectives with electronics specialists, and undertaken the reconstruction of production areas, the construction of new ones and their equipping with the appropriate testing and production equipment as well as computer systems).



Other ministries and departments are providing a great deal of help in all these matters to the enterprises and organizations of the Ministry of Automotive Transport. For example, a number of VUZ, including MAMI [Moscow Automotive Institute], are participating in the work and research on electronic systems; the enterprises of the Ministry of the Electronics Industry are helping to develop manufacturing processes for specialized microcircuits and are supplying the items required for completing control units and large special integrated circuits that have been developed in our branch; the enterprises of the Ministry of Instrument Making, Automation Equipment and Control Systems -- sensors for electronic control systems; etc. All of this has permitted us to begin organizing our own production of electronic and microprocessor systems and to equip significant batches of ZAZ-968M, AZLK-2140 and GAZ-24 passenger cars with them in 1986.

In accordance with the Complex Program for Scientific and Technical Cooperation Between CEMA Countries, joint work with specialists from these countries is being expanded. For example, a joint Bulgarian-Soviet enterprise for the production of motor vehicle electronic items is being built in the Bulgarian city of Plovdiv in accordance with an intergovernmental agreement that was signed at the beginning of 1986 and with a departmental agreement that was signed in October of this year. Soviet instruction manuals for the manufacturing of a number of units of these items have been shipped to Plovdiv. (Microprocessor ignition circuits for VAZ motor vehicles are already being produced there.) The new designs will be joint ones. It is planned to establish mixed Bulgarian-Soviet designer collectives for this purpose. Among these designs will be monitoring, measuring and diagnostic equipment, sensors, integrated circuits, etc.

Along with the designing of new motor vehicle electronic systems and the expanding of the production of already mastered ones, the developing of a production base, which is appropriate to these systems, is being continued in the branch's plants and a series of measures to improve technology and production processes is being carried out. The main task, which is being solved here, is to improve the organizational and technological flexibility of production, introduce automated systems into the design process, control equipment and production processes, completely mechanize and automate assembly operations and exercise element and outgoing control of the electronics items.

Many problems, which are connected with using electronics in our domestic motor vehicles, have already been solved or are in the solution stage. However, there is still a great deal that has not been solved. Among them are the need for a sharp acceleration in long-range scientific research aimed at the very rapid development and introduction into production of sensors, microprocessors and execution devices for the complex systems for controlling the power plant and the motor vehicle in general, which fully satisfy the conditions for their use in motor transport systems of various classes and designations; the development of the principles for the synthesis of motor vehicle electronic systems made of unified components (modules) as well as systems for implementing these principles; the establishment of a scale of adapted systems for controlling diesel engines and gasoline internal combustion engines that operate using different criteria (the initiation of combustion, fuel economy, toxicity of the exhaust gases, etc.) and which are



capable of taking the specific operating conditions, wear-and-tear, etc., into consideration; the designing of engines that are intended to be used with electronic systems based on the organization of their operating process and design; an increase in the role of functional and cost analysis during the development of new electronic systems; etc. Important problems, which have not been solved and which can significantly lower the national economic effectiveness of the most modern electronics, are the timely development and industrial production of technical diagnostics systems for electronic systems and devices and the training of specialists who know the equipment and who have mastered these systems. (The latter is especially important because experience has shown that a poor knowledge of electronic systems and the absence of diagnostic equipment lead to car-care center and truck fleet workers eliminating even small break downs by replacing entire systems. This makes the operation of motor vehicle equipment more expensive and forces one to produce an unjustifiably large number of spare parts or to reconcile oneself with their shortage.)

The enterprises and organizations which are engaged in motor vehicle electronics, should pay special attention to the development of advanced technologies for its manufacturing and also the testing and servicing base for it.

As can be seen from what has been said, the use of electronics in the products produced by our branch is receiving a new stimulus toward acceleration in the 12th Five-Year Plan. How it is taking place, how it will be expanded further, what means are being used to solve the tasks connected with it, what difficulties are being encountered on this path and at whose expense they are being solved will be discussed on the pages of our journal (in the section entitled "Motor Vehicle Electronics, Electrical Equipment and Instruments.") The journal edition, which is recommended to the readers' attention, is the first attempt at this discussion. Workers in the branch scientific research institutes and design bureaus, representatives of VUZ science, and specialists in the enterprises that are engaged in developing, producing and servicing motor vehicle electronics prepared it. They are sharing their thoughts, research results and experiences, which -- in the opinion of the editors and the editorial board of the journal -- should be definitely interesting both for workers in our branch and for those who are solving together with it the complicated and multi-plan task of using electronics in motor vehicles. It goes without saying that it will also be interesting to those who are operating or who will operate this equipment.

In conclusion, let us point out that the absolute majority of motor vehicle builders have accepted the task of using electronics in their products as a very important component in the struggle for scientific and technical progress. Evidence of this is the widespread development of socialist competition for the ahead-of-schedule and qualitative fulfillment of the tasks in the 1986 state plan and the 12th Five-Year-Plan, in general, and the decisions of the 27th Congress of our party; and the increase in order, discipline and organization as a response to the sharp criticism addressed to the branch's leadership, which was expressed in the party's Central Committee decree entitled "On the Unsatisfactory Fulfillment of the CPSU Central Committee's Decisions About Eliminating Deceit and Additions by the Moldavian

Communist Party Central Committee, Ukrainian Communist Party Kirovograd Obkom and the USSR Ministry of Automotive Industry"; the increasing efficiency and initiative at all levels of production and management; the criticism and self-criticism that is gathering strength, i.e., the noticeable intensification of the human factor. The new management conditions, to which the branch is shifting, and the organizational and technical steps, which have been undertaken and are being undertaken, will also contribute to the solution of the tasks being examined. That is why it is possible to express the firm conviction that it will be carried out without a doubt.

#### In The Scientific and Technical Council of the Ministry of the Automotive Industry

During recent years, the scientific and technical council of the branch has devoted a great deal of attention -- for completely understandable reasons -- to the problems of using electronics in motor vehicle equipment -- naturally, primarily to the development of technical subjects in this area, the determination of its priority directions, and the development of measures for the more effective solution of tasks in using electronics. At the same time, its sections -- in whose work not only their permanent members but also representatives of academic and branch science, design and technological organizations, VUZ, and enterprises are participating -- are systematically examining specific control systems that are being designed using electronics, evaluating and providing recommendations for their further development and improvement.

During one of its sessions, the automation and electrical equipment section examined the results and directions of the work in building and using electronic equipment within the brake and transmission systems of motor transport equipment. It was pointed out in the decision adopted that the work directions, which had been selected by the researchers and developers of this type of equipment, correspond to the trends in the development of the world's motor vehicle building industry and scientific and technical progress. In particular, this pertains to the electronic system for controlling the hydromechanical transmission on the new LAZ and LiAZ buses as well as a number of other branch developments. At the same time, the task of improving the development of microprocessor systems for controlling the power plant (the ZIL-130 engine and the three-stage hydromechanical transmission) on the LiAZ-677 bus with its subsequent transition to a complex system for controlling a diesel engine and mechanical transmission.

In addition, the decision approved the planning charts for scientific, research, testing, and design work on complex automatic systems for controlling the engine, clutch and transmission of passenger cars as well as the production of test industrial batches of antilocking systems (with an analogous control unit) for the brakes on trucks and truck trains. The fact that electronic control units, controllers and other control system elements, which are designed for use on new models of motor transport equipment, are native developments that are not inferior to similar future foreign items based on their set-up, construction and design, are being produced (or will be produced) in the branch's enterprises, was evaluated as a positive fact.

Ways to permit the introduction and production of well-proven test electronic systems and devices and steps for adapting specific items, which were designed using electronics, to more long-range (also specific) models of automotive transport systems, have been examined in the section. For example, it was recognized as being not only advisable but also necessary that the leading branch organization in the development and introduction of motor vehicle electronics-- NIiavtopriborov -- and the interested plants producing motor vehicle equipment work more actively at developing procedures and automated systems for the accelerated testing and operational development of electronic systems (for the traveling laboratories, which are being organized using the ATS models and where these systems are planned to be used.)

The section for automated control, electronics, electrical equipment, and instruments examined specific designs, which have or are entering serial production and which are noted in their design and execution for especially good perfection in the opinion of competent specialists. Among these items were, for example, the electrical equipment systems for powerful liquid preheaters that guarantee the reliable starting and automatic preliminary heating of motor vehicle diesel engines at low outside air temperatures. Having familiarized themselves with the logs that reflected the results of the test operations of these devices under extreme climatic conditions, the members of the Scientific Technical Council's section recommended both types of preheaters for use on diesel automotive transport equipment being produced for northern use.

This section's session also examined new procedures and equipment destined for automotive tractor electrical equipment enterprises.

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## USE OF THERMOPLANES DISCUSSED

Moscow MOSKOVSKAYA PRAVDA in Russian 3 Apr 87 p 3

[Article by I. Kovalenko: "A Paper Dirigible"; first paragraph is source introduction]

[Text] The chief argument in favor of creating a thermoplane capable of hauling loads of 500 tons a distance of 5,000 kilometers is its economy.

This dirigible looks unusual in drawings and sketches. The eye is not accustomed to an elongated "cigar"--the zeppelin, and a large disk--a singular "flying plate." Beside it were the figures: height--about 90 meters, length--220 meters. But my description clearly was not enough to convert the figures into the actual picture. You will agree that it is difficult to depict a dirigible the size of a real skyscraper suspended in the air. And now the platform separates from it and slowly descends downwards. They load onto it, let's say, a preassembled two-story section of a housing building or a small house--and the craft sets off on its journey. Many thousands of kilometers away, to a small town that is being built at a place lost in the Siberian expanses, to which it has not been possible to bring a proper road. You do not see an ordinary crane at the construction site, for the thermoplane delivers the section for installation directly from the air.

But for the present, let us leave behind these pictures, which are extremely fantastic for modern man, and let us return to history.

## The Dawn and Sunset of Airships

Frames of an old film documentary flicker on the screen in a small reviewing room. Here are the smiling faces of the aeronauts of the craft "Komsomolskaya Pravda," and hundreds of people on the Moscow River shore joyfully waving at the silvery "cigar" in the sky. And here is a frame that requires no explanation--a mass of fused, distorted fragments.

Much was recalled here. The start of the century has justly been called the epoch of dirigibles. All the world's newspapers and scientific forecasts sounded high-flown rhetoric about them. Thus, our country's scientists considered that dirigible transport had enormous prospects for developing Siberia and the Far East. The framework began to take shape: a docking facility and hangars were built near Moscow. The famous U. Nobile was consulted,



and K. E. Tsiolkovskiy took part in the design of the rigid dirigible. They planned to build about 100 craft. But the second step did not follow the first.

The spring of 1938 brought a tragic note. It was the eve of the opening up of the Moscow-Novosibirsk dirigible freight-and-passenger line, the country's first. Not long before, the whole world had applauded Soviet aeronauts who had set a world's record--they spent 130 hours in the air. Not much time before the navigation season. But....

All the planet's radio stations received the news report of the calamity: the Papanin party was being carried into the open sea and the ice floe was crumbling. But unfortunately, the weather was not fit for flying here, there was no place left for a landing, and a rescue ship and a submarine were stuck in the ice. And a dirigible flew to the rescue.

Tragedy occurred after 2 hours of the flight to Murmansk. The airship, which flew low, collided with Mount Neblo, which at the time was not marked on any map.

And later, in the next decades, there were only memories. The individual flights did not matter, they were like drops in the sea after the triumphal procession of dirigibles over the lines of the world's air ocean.

And so today there is complete oblivion? But no, right now tourist dirigibles are flying in Britain's skies, and in America they patrol the sea borders. At present we are sending only airplanes and helicopters into the air.

#### Just What Is a Thermoplane?

You know, I have repeatedly heard from nonspecialists the question: which is best--dirigibles, hybrids, airplanes or helicopters? Such a question cannot be answered. It has been posed incorrectly. One should not view any flying craft in isolation from its mission. This is just as absurd as trying to choose once and for all which is better: a submarine or a hydrofoil boat. Let us speak specifically about ALA's--lighter-than-air craft, the family to which thermoplanes also belong--a development by staff workers of MAI [Moscow Aviation Institute] under Corresponding Member of USSR Academy of Sciences Sergey Mikhaylovich Yeger.

A little digression. Dirigible builders do have their fervent admirers and no less fervent opponents. The name among the latter of Hero of Socialist Labor, winner of Lenin and State Prizes and Doctor of Engineering Sciences S. M. Yeger, caused a sort of bafflement when he started to work on the thermoplane. For he had spent almost his whole life creating airplanes and was for many years a deputy of A. N. Tupolev. In no way can you indiscriminately call him just a supporter of dirigible building. For he himself considers that the logic of scientific research and the economy's needs for the equipment require it.

...On the table are sketches, tables and diagrams. The shape of the flying plate is already well-known. It is clear that the group of developers has given it this design not because of the external effect: in this way,

the force of wind resistance is the same from any direction and creates a supplementary lifting force.

There is nothing surprising about the fact that our conversation about the present, more precisely about the future, of such airships is invariably intertwined with reminiscences and parallels from the past. Let's say the talk turns to reliability. The tragic failure of the Nobile expedition 60 years ago at once comes to mind. The accident occurred when the dirigible "Italia" was covered with an icy crust. Or the case of the German "Hindenburg," which blew apart before the eyes of shocked spectators. For in those days, sparks were enough if hydrogen from the envelope mixed with the air.

"Here is why we named our vehicle a 'thermoplane,'" says sector supervisor Yuriy Grigoryevich Ishkov. "We are using helium instead of the explosion-prone hydrogen. In order to preclude gas leaks, the bag is made of modern polymer materials and the framework of light alloys. But the main difference is the fact that hot air at a temperature of 150-200 degrees is used along with the helium. Thus we have, in essence, returned to the principle of the first lighter-than-air craft of the Montgolfier brothers, which also was 'hot.'

"Now about the main thing--the economics. The engines are serially produced, like those on the TU-114, except that, for an identical load, they need one-fifth the fuel required by the airplane, and one-twentieth to one-twentyfourth that required by a helicopter."

I do not think that the numerous ministries that are concretely interested in the Moscow specialists' development put the economic factor in second place. Thus, for example, a letter from USSR Minlesbumprom [Ministry of Timber, Pulp and Paper and Wood-Processing Industry], which cites this figure: "This ministry spends more than 400 million rubles annually on 'forestry' roads alone." Roads built in the tundra and taiga, with their permafrost, are indeed "gold" roads. The number of ministries that would like to have such transport are the ones that will decide the future sphere of use of dirigibles. It is clear that the modern view of the purpose and tasks of lighter-than-air transport differs radically from the view that previously prevailed. Dirigibles of the past were used overwhelmingly for passenger transport or as military airships. And, more rarely, as means for scientific research and expeditions. And they took cargo, basically mail, on board, as far as they flew, the same as today, for example, when a mail car is attached to a passenger train.

Second-generation ALA's are being developed primarily for cargo, to transport industrial loads. Gas and oilfield workers, builders, power workers and geologists are waiting for the dirigible.

Let us think about this generally ordinary situation: a hydroelectric-power station turbine, let's say, has to be hauled to the North. You do not place it inside a vehicle; it must be disassembled into parts and, at times, hauled over such a circuitous route that only the specialists know what kind of a fortune it costs the state. But the thermoplane travels the shortest straight-line distance between the two points involved, dispensing with the necessity for disassembling superheavy units into parts by carrying them assembled.

Or take another example. Honor and praise to the courage of the daredevil pioneers who go off into the taiga or tundra and prepare the minimum living conditions for those who will come later--gas- and oilfield workers. They spend months doing difficult labor before they lay a road here, over which machinery and vehicles are hauled to their home. The concept is simple: all this can be delivered by dirigible.

I have already said that the dirigible builders have their admirers and opponents. Several pages of my notebook are divided in half. On one side are written the reasons of those who are "for" it, and, on the other side, the arguments of those "against" it. I will deliberately evade a recital of the polemics. Both sides speak the language of mathematical computations. But the opponents have an extremely substantial trump card: in speaking about the prospects for developing airplane and helicopter manufacturing, they rely on today, on the achievements of the present. The proponents of dirigible building show drawings, sketches and figures. Let us take a look, they say, at what national economic benefit the flying machines promise. The answer: this system is more expensive and less effective and the program will consume more time and has unforeseen engineering risks. And so on, in a closed circle.

This circle can be broken only one way--by experiment, the creation of a first experimental model of a dirigible, built on a modern technical basis, though on a smaller scale than industrial models. Otherwise the theoretical dispute can go on endlessly, and the dirigible will remain on paper, without soaring into the sky.

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## TRANSPORTATION MEANS FOR VERY LARGE, HEAVY LOADS

Moscow MATERIALNO-TEKHNICHESKOYE SNABZHENIYE in Russian No 2, Feb 87 pp 59-62

[Article by M. Kaganskiy, member of VSNTO [All-Union Council of Scientific and Technical Societies] Committee on Transport: "Transport for Outsized and Superheavy Cargo"]

[Text] One must go ever farther and farther into the north, into regions that are difficult of access, uninhabited and roadless, for the earth's riches, and each step forward on the path is increasingly expensive. Today the expenditures for a season's haulage of outsized freight into parts of Siberia, the Far North and the Far East reach 40 percent of the cost of the production capacity being erected, amounting to billions of rubles.

The delivery of outsized and superheavy loads of more than 500 tons is a special difficulty. These have to be broken down into constructional members and then, after delivery, reassembled on site, often where the prerequisites for doing so are lacking.

The outfitted-module method of construction, using the "supermodules" that have been developed rapidly in recent years, can change basically the strategy of the North's industrial development, reduce the time spent in erecting facilities 2-fold to 3-fold, increase labor productivity at construction projects severalfold, greatly improve the quality of construction and installing work, and reduce the final costs.

The newest technology consists primarily in the delivery of articles that incorporate the highest degree of factory preparation to the installation site. For example, a finished two-story modular house with all the stuffing, completely equipped oil derricks, power-engineering units, constructional structure and other outsize or superheavy freight. It is this very technology that is the key to solving the economic and social tasks of these regions and to accelerating their development.

But such technology also requires a basically new type of transport. It should have these features: a load-carrying capability of several hundred tons and a potential for doing without airfields, and be capable of flying not only at low speeds but also at zero speeds, that is, of hovering, and of performing installing-crane operations.



Lighter-than-air craft can fill the role of this type of transport, which will be capable of solving the problem of delivering and installing outsized and superheavy freight: dirigibles built on a new technical foundation, and hybrid vehicles. Dirigibles can, in principle, lift cargo of practically unlimited weight. But a problem of enormous difficulty arises--controllability and maintaining the dirigible in place when the wind is strong. Where a craft has great inertia, the control system must provide for almost instantaneous operation.

The USSR Academy of Sciences has made preliminary assessments of the feasibility of various transport means (water, land, airplane, helicopter, air-cushion vehicles, ground-effects machines, and so on). Its conclusion: the use of dirigibles, despite the high specific costs (in relation to water and rail transport), allow the restrictions on seasonality, size and weight and local terrain to be lifted and heavy equipment to be delivered under the difficult natural and climatic conditions of West Siberia and the USSR's Northeast without the construction of the traditional airfields or ports.

The prospects for using lighter-than-air craft is truly unlimited. For example, dirigibles can deliver equipment for oilfield and gas-field workers and for construction workers over swampy areas. With their help it is possible not only to haul large modules of trunk-pipeline members to the construction site but also to erect them and to do construction work the year round. A geological expedition must, on the average, bring in a ton of freight for each meter of drilling. This hinders the development of operations in northern regions that are difficult of access.

Sailors see enormous prospects for using lighter-than-air craft. First of all in developing the Arctic, to which passage by other transport means is closed. Specialists consider that today the road to the Arctic truly is costly--transport structures and support for hauling are so uneconomical here.

The delivery of freight to small unequipped points on the Northern Sea Route line involves especially great difficulties. Ships often are unloaded by their crews in the roadstead by means of nonself-propelled floating facilities or on shore ice of long standing. Under these circumstances, it is very difficult to realize the enormous potential that is incorporated in progressive constructional and technological solutions of modern, highly productive ships.

This happens: the main assembly line is equipped with the most modern means, which correspond to the requirements of the scientific and technical revolution, while the systems that support it are at yesterday's level. To create hauling complexes for one-time unloading at such points is economically undesirable because of the seasonal nature and, as a rule, the relatively small volume of haulage. The delivery of cargo after unloading by surface transport, directly to the recipient, also involves great material outlays and labor expenditure.

Therefore, the use of lighter-than-air craft is a most urgent requirement. In mutual operations with water transport, it can create a highly effective system of transport technology. USSR Minmorflot [Ministry of Maritime Fleet]

has made preliminary calculations about the effectiveness of using freight dirigibles with a load-carrying capacity of 500 tons. For unloading at roadsteads, cargo in consolidated modules--containers or bundles--can be removed from ships by dirigibles and delivered to the place of discharge on the shore or even directly to the cargo's eventual recipients.

The operation of "supplier" dirigibles also is possible. A network of storage bases is created along the Northern Sea Route's lines, where cargoes are brought in by ship basically during the navigation season. Then small batches of cargo are formed into consolidated units (modules or cassettes) that weigh up to 500 tons and are transported by dirigibles to the cargo recipient's base at any time of the year, regardless of the weather.

Perishable cargo (fruits and vegetables) can be delivered in refrigerator modules in a short time from the regions of origination of the cargo and delivered directly to customers, bypassing other types of transport.

Dirigibles can also be used for other maritime operations--for installing and servicing offshore drill platforms, emergency-rescue operations, heavy-duty crane work, and ice reconnaissance when ship convoys travel through the ice.

Right now, when the newest ships of the maritime fleet have become practically large economic enterprises equipped with modern innovations of scientific and technical progress, because of which their cost has grown immeasurably, each day and even each hour in the reduction of idle time in port yields, in the final analysis, a considerable increase in the fleet's throughput.

Calculations indicate that a 500-ton dirigible will be a fairly inexpensive means of transport--the cost per ton-kilometer will not exceed 5-7 kopecks. For comparison: haulage by automotive transport over dirt roads raises the ton-kilometer cost to 30 kopecks. The difference in cost of haulage by these means of transport will alone cover in a very short time the additional expenditures made for organizing the new system and will enable rapid self-reimbursement.

The use of lighter-than-air craft opens up new possibilities for the forestry industry.

Vast masses of forests in areas of Siberia, the Far East and the European North which are located in places that are remote and difficult of access more often than not are not involved in operations, and, for the most part, forestry management work has not even been conducted there. Their development by means of traditional types of transport is hampered and is not always economically desirable--the construction of forestry roads for round-the-year operation requires not only enormous labor expenditures and capital investment but it also takes up much time. Equipping the forestry industry with lighter-than-air craft paves the way for development of the greatest untouched forestry resources.

Lighter-than-air craft can find wide application in forestry management work, during the spraying of large forest stands, fire-prevention patrolling, and the extinguishing of fires. These craft can be used to deliver people and

equipment to any point and to ship out felled trees to the processing sites of large logging complexes.

Research has indicated that the operation of ordinary helicopters for logging and the shipping of logs out of remote regions that are difficult of access, where up to 40 percent of the forest reserves is concentrated, is economically undesirable. The cost of haulage by lighter-than-air craft, for example (according to the design data), is 5-fold to 6-fold cheaper. This opens up broad prospects for transporting wood and for making up bundles of timber.

The use of lighter-than-air craft will enable logging operations to be centralized on the basis of constantly operating large complexes, which log and process 4-8 million cubic meters of wood per year. In addition to substantial improvement in the use of the forest, this will enable severe social problems to be solved--it will reduce personnel turnover, provide employment for members of loggers' families, and create appropriate municipal, cultural and personal-services conditions that meet modern requirements.

The steadiness of logging operations is being increased by far, and dependence of the export of timber on natural and climatic conditions is being reduced to a minimum. Calculations indicate that the use of lighter-than-air craft in forestry will enable the industry's labor productivity to be at least doubled.

But the greatest advantage of such flying craft can be manifested in the transport of finished outsized modules, for example, power-engineering aggregates. We say that the delivery of assembled turbine units to the Ust-Ilimsk and Sayano-Shushenskaya GES's will save tens of millions of rubles per year.

Today the ratio in power engineering is about like this: three people work at a construction project, under difficult conditions, but only one at the construction-industry enterprises. The use of dirigibles, according to USSR Minenergo [Ministry of Power and Electrification] computations, will enable the industrialization of construction work to be increased by a whole order of magnitude.

The use of lighter-than-air craft in many other branches of the national economy also opens up even more prospects.

In brief, there is a socio-economic demand. And there are technical potentials.

According to an evaluation of the USSR Academy of Sciences, despite the existing problems, the possibilities of the domestic scientific, technical and materials base are adequate for solving successfully the technical tasks connected with creating industrial-type lighter-than-air craft with a load capacity of 500 tons.

There is no shortage of ideas. Back in the 1970's, fans of domestic dirigible building proposed a number of interesting developments. Imagine a gigantic lens-shaped envelope about 1½ kilometers long. Such a superdirigible (the developer called it a thermoplane) with nuclear engines would be able

to haul cargo weighing up to 10,000 tons: as much as a heavily loaded railroad train. It would make round-robin flights on closed courses without landing for months. Cargo for the thermoplane would be delivered by special elevators.

Fantasy? Yes. But completely realistic. It has been proved theoretically, substantiated scientifically, technically and economically, and defended by authoritative review bodies that included the most prominent scientists and specialists.

Such an aerial superliner obviously will ply the expanses of the fifth ocean only in the 21st Century. But there are designs that are feasible today. For current needs, a group of designers from the Moscow Aviation Institute, which is headed by the manager of the Chair for Design and Building of Airplanes and Corresponding Member of the USSR Academy of Science S. M. Yeger has proposed a thermoplane somewhat smaller, with a load capacity of 500 tons.

Naturally, large craft are not needed everywhere. The national economy needs transport media with a broad range of load-lifting capacities, including those that can lift from 20 to 200 tons. There are such developments also. For example, a combined ballastfree craft--a helistat, a hybrid helicopter and lighter-than-air craft which was created under the supervision of inventor A. V. Larin.

Many interesting innovations have also been created by other enthusiasts of the new direction in the development of flying craft. Some of these developments have been well known for decades. However, no practical steps have yet been taken to create even experimental models.

Why? There is no unambiguous answer to this question. The causes are varied: absence at the time of the necessary engineering base and an insufficiency of experience, and the element of risk associated therewith. But one of the most important, perhaps, is the country's lack of a single center for dirigible building.

In essence, uncoordinated groups of enthusiasts are working on lighter-than-air craft. Many of them have been joined into public KB's [design offices] and even scientific-research institutes. And the state organization which, in its official capacity, is supposed to be engaged in such developments--USSR Minaviaprom [Ministry of Aviation Industry] has, in essence, not only avoided this work but has even exerted no few efforts to bury the very idea of creating lighter-than-air craft.

Authoritative experts recognized both the thermoplane and the helistat and a number of other developments as being promising a decade and a half ago. But all the solutions were "blackballed" by various later commissions. This would not have happened had USSR GKNT [State Committee for Science and Technology] implemented a fundamental state-level policy and not a policy on behalf of an industry. After each positive evaluation of USSR Gosplan's Gosekspertiza [State Examining Commission], "counterweight" commissions were organized at the initiative of the manager of the Transportation and Communications Section of USSR GKNT N. N. Shinkarev. G. Svishchev, who invariably gave exclusively negative evaluations, chaired them. Both commission members and party oblast commission workers who were interested in the new and



promising transport modes pointed out their excessive absoluteness. Nevertheless, an impassable barrier was erected from these evaluations.

Let us take, for example, the helistat "Larin." The former USSR Ministry of Forestry and Woodprocessing Industry, USSR Gosleskhoz [State Committee for Forest Management], USSR Minenergo, USSR Minneftegazstroy [Ministry of Construction of Petroleum and Gas Industry Enterprises] and USSR Mingazprom [Ministry of Gas Industry] beginning in 1973 repeatedly sent letters to USSR Gosplan, USSR GKNT and USSR Minaviaprom requesting acceleration in the creation of new types of flying craft that would be capable of loading and unloading without landing on the surface, airborne spraying, and autonomous transport-crane operations.

USSR Gosplan's Gosekspertiza noted in its conclusions that helistats are far more economical than helicopters in regard to prime cost of hauling, specific fuel consumption, materials intensiveness and flight safety and can be operated from natural platforms.

The ministries proposed to take steps to accelerate creation of the first types of helistats and the introduction thereof in a test-production procedure prior to 1979. For these purposes, it was considered necessary to charge USSR Minaviaprom with organizing a specialized science-and-production association for developing and building helistats and testing them under production conditions.

Supervisors of the USSR Ministry of Foreign Trade asked USSR Gosplan and USSR Minaviaprom to solve positively the question of creating craft of this type that are independent of airfields in 1977. However, USSR GKNT ignored all the requests of the interested ministries and Gosekspertiza recommendations, referring to all those same USSR Minaviaprom evaluations.

Meanwhile, the new review commission of USSR Gosplan, which included the most prominent specialists, including academicians G. Logvinovich and Kh. Razmatulin, decided, "The negative responses of Minaviaprom and MGA [Ministry of Civil Aviation] to the question of creating helistats that were examined during the review process were founded on arguments that had not been confirmed by analysis of the existing computations of experimental data and were not in agreement with the latest information on foreign research in the area of lighter-than-air craft. It is recommended that Minaviaprom create experimental types of helistats and test them, on the basis of which USSR Gosplan will introduce proposals for the manufacture of craft of the new type."

A group of academicians--A. Trofimuk, A. Aganbegyan, N. Burevich, V. Makeyev, V. Mishin, N. Nekrasov and N. Yanenko--pointed out in their evaluation apropos the helistat: "The construction of such a craft does not involve the solution of any sort of complicated scientific problems; it requires only optimal solutions for the design of the lighter-than-air portion and its union with ready-made propellers and engines from serially produced helicopters." They delivered a reproach for the fact that "the interested ministries and agencies did not pay enough attention to the development of this equipment, which is promising and is urgently needed by our country, and they were slow in creating experimental and test models."

The academicians warned about the danger of forfeit of a Soviet "first" in developing a new direction in aerial transport that is important for the economy.

At the order of Ye. P. Velikhov, -vice-president of the USSR Academy of Sciences, the greatest scientists reviewed the questions of strength, aerodynamics and other technical characteristics of the helistat. They expressed the opinion: the problem raised by the innovators, that of developing aviation that is independent of airfields, deserves the attention and support of the USSR Academy of Sciences Presidium. Academician L. I. Sedov considered it desirable to undertake quickly the creation of domestic flying craft--helistats. For this purpose, a design bureau must be organized and the appropriate aerodynamic research established over a broad front.

As we see, everyone was "for." Except for USSR Miniaviaprom. For a decade and a half the matter did not advance one iota. It was the same also with the innovations of the other inventors.

Independent designers who work on the transporting and installation of equipment are ready to build experimental models with a load-lifting capacity of 8-10 tons in 1½ to 2 years. However, again, the voices are resounding: it is unrealistic. I recall that at one time dirigibles with 10 times the lifting capability were built in less than a year. And this where the technical base was backward by current criteria.

Today's engineering potential is much higher. And the innovators have gained experience. But a center is needed which would join the forces of the uncoordinated groups of developers and put the business on modern scientific and technical rails, and would be capable of producing purposeful experimental verifications and of developing a new craft. Similar intersector centers are already operating successfully. It is enough to mention the institute of Electrical Welding imeni Ye. O. Patton.

The country still does not have an organization which can be charged with building and operating dirigibles or even perform large-scale research in this field.

Academician N. V. Cherskiy and USSR Academy of Sciences Corresponding Member S. M. Yeger consider that the problem of building dirigibles must be solved in integrated fashion, at the state level. Already the current five-year plan provides for the development of design and test operations for the building of dirigibles and the creation of a production-equipment base at an accelerated rate.

It is said that the new is the old that is well forgotten. A similar center in our country has already existed. It was created in the GVF [Civil Air Fleet] system back in 1931. During its existence--less than 10 years--it built 13 dirigibles of various sizes and constructional schemes, hundreds of specialists with higher and secondary education were trained, and a number of record flights were set in lighter-than-air craft. Seventeen international records out of 24 belonged to Soviet fliers of lighter-than-air craft. Research work was performed on the construction of

dirigible ports and on the creation of air-mail lines among a score of the largest cities in the country.

But all this is in the distant past. Nowadays our country does not have even one such craft.

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## BRIEF

DIRIGIBLE FOR OILFIELDS--Staff workers of the Ufa Petroleum Institute have developed a promising means of transporting freight to West Siberian oil and gas fields that are difficult of access--an aerial cableway ring. They propose to do hauling over it, using an electrical dirigible, an experimental model of which also has been created by the institute. The electrical dirigible, with gondola, is filled with noncombustible helium and has two motors, which are joined with the current-carrying lines by a special rod. Cables stretched out between supports serve as the "rails" for the aerial road. The current carriers are also attached to these supports, to supply power for the dirigible's motors. The "aerial streetcar" will be able to take aboard up to 30 tons of various types of cargo, haul passengers and develop a speed of up to 80 kilometers per hour. The craft will lift off and descend by means of tethering fasteners. The economists have calculated that 1 kilometer of the aerial cable line will cost one-tenth as much as the same length of hard-topped highway. It will also be possible to haul out timber and ore from regions difficult of access and to transfer cargo across mountain ranges with the electrical dirigible. [Text] [Minsk SOVETSKAYA BELORUSSIYA in Russian 24 Apr 87 p 4] 11409

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